

Homonymy in Aristotle

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1 Introduction

Anyone with a slight acquaintance with Aristotelian philosophy is familiar with such locutions as ‘ x isn’t F except homonymously’, or ‘ F is said in many ways’. When saying that two things are homonymously F , Aristotle means that they have their name in common but different definitions or accounts of being corresponding to the names. The aforementioned idioms are, as I said, easily found throughout the whole corpus, but Aristotle is most perspicuously occupied with discussing the phenomena of homonymy or multivocity (‘things being said in many ways’) in his logical and dialectical works, in contexts devoted to methodological considerations. As he is there keen to point out, it is of great importance not to overlook homonymy in the construction of arguments. For by letting homonymy slip into one’s premises, one risks drawing unwarranted conclusions.¹ Likewise, one must be wary not to suppose unity amongst divergent phenomena, and as a consequence fail to secure a proper subject matter for one’s enquiry,² another way of ignoring homonymy. It is, however, not only in his destructive or critical moments that Aristotle makes use of homonymy. If ‘homonymy’ simply means ‘things with the same name, but with different accounts of being’, it seems that multivocals, or ‘things said in many ways’, are also reckoned as homonyms by Aristotle. When we now remember that ‘being’, ‘cause’, ‘good’, ‘nature’ etc. are among the most notorious examples given by Aristotle of multivocals, we see that—supposing that we can justify the equivalence of homonymy and multivocity—a notion of homonymy is central, and possibly of great importance, in his constructive or positive philosophy as well.³ His appeals to multivocity are accordingly not restricted to critical contexts, where he for example

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- 1 In more familiar words, one risks committing fallacies of equivocation. To give a banal example of a such: (i) The end of a thing is its perfection, and (ii) death is the end of life, so (iii) death is the perfection of life. ‘End’ is of course equivocal (i.e. homonymous) in premiss (i) and (ii). See chapter 4 in *Sophistici Elenchi* for more on fallacies involving homonymy.
 - 2 In *Posterior Analytics* I 28 Aristotle says with regard to a science that it is *one* ‘if it is of one genus’ (87a38). A genus is something common between its species, and is therefore predicated synonymously (that is, non-homonymously) of them. (See also *Posterior Analytics* I 7, 75b7–8)
 - 3 In *Metaphysics* Gamma 2 Aristotle accordingly goes beyond the condition for the unity of science stated in the cited passage from *Posterior Analytics* above: ‘For not only in the case of things which have one common notion [τῶν καθ’ ἓν λεγομένων] does the investigation belong to one science, but also in the case of things which are related to one common nature [τῶν πρὸς μίαν λεγομένων φύσιν]; for even these in a sense have one common notion’ (1003b12–15). Both καθ’ ἓν-predication (synonymous predication) and πρὸς ἓν-predication (viz. non-synonymous predication in which the predication nonetheless is systematically related to one thing/nature/source) is here said to be a sufficient condition for a unified science. (Cf. *Metaphysics* Gamma 2, 1004a23–26)
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confronts the philosophizing of his predecessors, most notably Plato, but are also very much present in his own systematic philosophy. To give but one example: Aristotle accuses Plato in numerous places of failing to notice the complexity of certain central philosophical concepts, and the variety of diverse phenomena and circumstances of which and in which they are applied. This is, in Aristotle's view, what leads Plato to posit a single Form of Goodness, being the same for all good things, and in which they participate, according to Platonist orthodoxy, in order to be what they are, namely good things. The mistake here, according to Aristotle, is to assume that all good things are good in the same way; that the goodness is somehow common across all cases. In criticising Plato for ignoring homonymy, Aristotle insists that the kind of unity advocated by Platonism, in this case of the phenomenon of goodness, does not stand the test of thorough philosophical enquiry. Thus an appeal to homonymy, which we in this introduction have been assumed to be the same as multivocity, is *both* central to Aristotle's handling of what he reckons as a tendency in philosophy to incautiously treat subtly complex and intricately related worldly phenomena as unified and uniform, *and* crucial as a powerful conceptual tool in his own constructive philosophical work, when he is eager to outdo his colleagues in making sense of worldly things and happenings. Aristotle is firmly convinced that the ordered world is capable of being satisfactorily accounted for, even though the account will turn out to be more complex than what his predecessors could foresee, and he thinks that his concept of homonymy is well suited for the task of explaining such an order in multiplicity (to parrot the title of Christopher Shields' influential book on this topic). By showing the ways in which many interesting homonyms are associated, he exemplifies an alternative way of explaining the ordered world which pays heed to the more or less obvious complexities overseen and disregarded by his predecessors.

In the first part of the thesis (chapter 2) I will present Aristotle's basic conception of homonymy, show that it has the broad application assumed for it in this introduction, and respond to considerations in support of a different and more narrow understanding of homonymy. In doing so I will claim interpretative support from a wide range of texts spanning the whole of Aristotle's philosophical career, and will thus additionally argue that Aristotle holds on to the same conception of homonymy more or less consistently throughout his whole life. After having summarized the kinds of homonymy acknowledged by Aristotle (in 2.5), I conclude the first part of the thesis by giving a

survey of the different uses Aristotle makes of homonymy in his philosophy (in 2.6). In the second part of the thesis (chapter 3) I give a detailed, critical presentation of Christopher Shields' causal analysis of core-dependent homonymy. Core-dependent homonyms are homonyms which are associated, viz. has overlapping definitions, and amongst whom one is primary in the sense that the definitions of the other inevitably makes reference to it. When giving a causal analysis of these homonyms, Shields explains the relations among the core and non-core homonyms in causal terms. Although his analysis is very promising, its difficulty in accounting for the asymmetry in the causal relation between core and non-core instances weakens it considerably. In the third part of the thesis (chapter 4) I develop criticisms of Shields' analysis hinted at in the second part, presents a notion of causal priority that might be able to account for the asymmetry in the relations between core and non-core homonyms (4.1), and conclusively confronts Shields' analysis with an example of core-dependent homonymy that arguably evades causal analysis (4.2), thus threatening the generality of his analysis, according to which standing in a causal relation to a core homonym is a necessary condition for qualifying as a core-dependent homonym.

Many significant contributions have been made to the study of homonymy and related topics in Aristotle during the last sixty years or so, and the exposition that follows is indebted to numerous participants in this flourishing branch of Aristotelian scholarship.⁴ Among the important influences, Christopher Shields' recent work on homonymy has undoubtedly left the strongest mark on this exposition.⁵

4 The contributions by Owen (1960), Owens (1951), Hintikka (1973) and Irwin (1981) are especially important for this study.

5 Shields (1999)

2 Homonymy: the basic conception

2.1 The definition of homonymy in the *Categories*

As I have already mentioned, talk of homonymy is to be met with throughout the whole of Aristotle's corpus. That being said, one finds the most extensive treatment of homonymy in the part of Aristotle's works devoted to logical and methodological questions, the so called *Organon*. Here he explicitly deals with the phenomenon of homonymy in the books *Topics* and *Sophistici Elenchi* in connection with discussions of syllogisms and scientific definitions. A typical situation in which homonymy is mentioned in these works is when he advises us to be cautious not to let homonymy slip into the premises so as to produce invalid conclusions in argumentation. Even though talk of homonymy frequently crops up in them, a definition of the concept is curiously nowhere to be found in these works. The only place where Aristotle actually defines homonymy is in his early work the *Categories*, where out of the blue and with no precaution or any previously given reason,⁶ homonymy is distinguished from synonymy and paronymy at the very beginning of the work. Of these three it is the concepts of homonymy and synonymy that are of interest to us.⁷ After having made these introductory distinctions, Aristotle proceeds to discuss matters apparently unconnected with the first section, leaving us to ponder the significance of the preliminary clarifications, and how they might relate to the questions that occupy the rest of the work.⁸ We will discuss further the relation of the introduction to the preceding parts of

6 This fact has made some philosophers, notably Michael Frede (1983, 1 and 1987, 11), speculate that an original introduction to the work, which contextualizes it and tells us what sort of enquiry it is etc., is lost. An example of a longstanding dispute with regard to the *Categories* (perhaps partly due to its lack of a proper introduction) is whether it is a logical or metaphysical work.

7 '[Paronyms] are things denominated, with a difference in case-ending, from one of the instances ... They are differentiated entirely on grammatical distinctions' (Owens, 1951). The example Aristotle gives of a paronym in *Categories* is 'grammarian' which is denominated from 'grammar'. Notice that both homonyms and synonyms can be paronyms (cf. *Topics* I 15, 106b29–107a2): If a thing is a homonym, its paronym will also be a homonym. Example: 'healthily' (which is paronymous with 'health'). For a different view on paronyms see Günter Patzig (1960) and Wolfgang-Rainer Mann (2000) who both suggest that paronyms occupy a conceptual space between homonyms and synonyms, and their understanding of paronyms is thus close to what we will come to call associated or systematic homonymy. I will not discuss their views. As far as I can see, they have sparse textual support for their view, and besides, there is no room for it—nor need for it—once the special class of associated homonyms has been accepted.

8 In fact, homonymy is not mentioned anywhere else in the *Categories*. Aristotle does however use 'multivocity' once, at 8b26: '...quality is one of the things that is spoken of in many ways.' 'Synonymy', on the other hand, crops up three more times in the work, at 3a34, 3b7, and 3b9.

the *Categories* later, but let us now have a look at Aristotle's claims regarding homonymy in the *Categories*. Aristotle says: 'When things have only a name in common and the account of being [λόγος τῆς οὐσίας] which corresponds to the name is different, they are called homonymous ... When things have the name in common and the account of being which corresponds to the name is the same, they are called synonymous'⁹ (1a1–2,6–7). The account of synonymy given here is quite simply: ' x and y are synonymously F iff (i) both are F and (ii) the definitions corresponding to " F " in " x is F " and " y is F " are the same.' The account of homonymy is given in negative terms, as lacking one of the conditions of synonymy: ' x and y are homonymously F iff (i) both are F and (ii) the definitions corresponding to F in " x is F " and " y is F " are not the same.' This definition of homonymy is a bit unsatisfactory however, for it does not clearly settle if only things with just the name in common, and nothing more, are to qualify as homonymous, or if things having the same name and not exactly the same (but in some way related) definition or account of being¹⁰ is also included. If one opts for the first alternative and holds that homonymy is to be restricted to things with the same name and completely distinct and unrelated definitions corresponding to that name, then one will have to admit of a *tertium quid* between homonymy and synonymy, viz. things with related or overlapping definitions. If one instead opts for the last alternative, the distinction between homonymy and synonymy will be *exhaustive*, that is: for any thing x , x is either a homonym or a synonym. (Or, if talking about words: Every definable term is either a synonym or a homonym.¹¹) For those holding that two things are homonymous only if they have their name in common and have completely distinct definitions, homonymy aligns with straightforward ambiguity. 'River

banks' and 'money banks' are homonymously called banks because the definition of 'bank' in the different cases are wholly distinct. Let this be the *narrow conception* of homonymy. The homonyms subsumed under this conception are all, owing to the fact that their definitions are distinct and unrelated, *discrete homonyms*. But consider the more troubling case of 'healthy' as we encounter it in contexts such as: 'healthy complexion', 'healthy lifestyle' and 'healthy banana'. The definition of 'healthy' in

9 Slightly modified Oxford translation. Unless otherwise indicated the translations given throughout the text are from The Revised Oxford Translation (Barnes 1984).

10 I use 'account of being' and 'definition' interchangeably since a definition *is* an account of being for a given thing.

11 I will follow Aristotle in speaking of both things and words as 'homonymous' and 'synonymous'. More on the domain of homonymy and synonymy and the justification for sliding between a lexical and ontical domain in our talk of homonymy and synonymy follow shortly in 2.1.2.

these cases is arguably different ('indicative of health', 'productive of health' etc.), so that it fails to qualify as synonymous across these cases. The different definitions of 'healthy' in these cases are none the less still related somehow, since they all appeal to health. Is it then a homonym, or does it fall between homonymy and synonymy, making up a third class of things or terms? Let us call the conception of homonymy which also subsumes these cases the *broad conception* of homonymy. Based on the relatedness of their respective definitions, we will call 'healthy' and similar homonyms *associated homonyms*. The broad conception of homonymy encompasses—there should be no doubt about that—*both* discrete and associated homonyms.¹²

If we restrict our attention to the *Categories* in our attempt to reveal Aristotle's view on the nature of homonymy, we will very likely end up confused and frustrated. The example that Aristotle gives right after having stated his definition, is that both a man and a picture is a ζῷον, a name that in Greek denotes both animal and picture. Immediately this seems to support the narrow conception of homonymy since the definitions of man and picture, the accounts of their being, are completely distinct. If, by contrast, ζῷον is meant to signify 'picture of an animal'—something it often does in Greek, and which makes Aristotle's example here unnecessarily confusing—, then it is not so obvious anymore that this is the only possibility. For an account of the being of a picture of an animal will somehow refer to the account of the being of an animal, 'something with a perceptual soul', for something will count as a picture of an animal only insofar as it succeeds to a certain degree to represent a thing with a perceptual soul, and the definition of a picture of an animal will then have to include the definition of an animal (something which clearly constitutes a definitional overlap). If we think that ζῷον means 'picture of an animal' in the first paragraph of *Categories*, we thus have reason to believe that Aristotle opts for the broad conception of homonymy. But because, as I have noted, ζῷον is ambiguous in Greek between 'animal', 'picture of an animal' and 'picture'¹³, we are not in a position to say if Aristotle is giving us an example that demands the broad conception or not. But even if Aristotle really is

¹² The two technical expressions 'discrete homonymy' and 'associated homonymy' are both adopted from Shields (1999). 'Associated homonymy' has in the literature also been labelled 'related homonymy' (Ward, 2008), 'systematic homonymy' (Ward, 2008; Frede/Patzig 1988, vol. II, 72) and 'connected homonymy' (Irwin, 1981). Even though I will occasionally use these other characterizations as well, 'associated homonymy' is my preferred technical choice. 'Discrete homonymy' is preferred over 'accidental homonymy' (Ward, 2008; Frede/Patzig, vol. II, 72: 'zufällige Homonymie', as I will reserve this to a subclass of discrete homonyms), 'unconnected homonymy' (Irwin, 1981), 'unrelated homonymy', and 'distinct homonymy'.

¹³ An example of a use of ζῷον to simple mean picture is given by Herodotus (4.88): 'to have *pictures* of the bridging of the Bosphorus painted [ζῷα γράψασθαι τὴν ζεύξιν τοῦ Βοσπόρου]' (Liddell & Scott, 1968).

alluding to the complete distinctness of the definitions of ‘man’ and ‘picture’ in illustrating his conception of homonymy, it is not yet excluded that he, in addition to such homonyms with absolutely distinct definitions (the boringly obvious ones) also admits of ones with related, i.e. overlapping, definitions, and that the broad conception is his account of homonymy even though he does not give an example that definitively settles this.

When remembering that Aristotle in *Metaphysics* Gamma 2 states that ‘being is said in many ways [τὸ ὄν λέγεται πολλαχῶς], but in relation to one thing [πρὸς ἓν] and one kind of nature, and not homonymously’, (1003a33–34, my own translation) and immediately draws the comparison with ‘healthy’ and ‘medical’, one is perhaps tempted to regard this as *prima facie* evidence for the view that there have to exist multivocals (‘things said in many ways’) holding a position as a *tertium quid* between homonymy and synonymy. I will argue that this is too hasty a conclusion, and by invoking broader textual evidence try to show that Aristotle actually holds that the distinction between homonymy and synonymy *is* exhaustive (and thus that ‘being’, ‘healthy’ and ‘medical’ are homonyms, although, as we shall see, not so-called accidental homonyms¹⁴), and consequently that ‘homonymy’ and ‘multivocity’ are extensionally equivalent.

2.2 Excursus: the domain of homonymy

It is perhaps surprising that I numerous times in the preceding paragraph have talked of *things* as being homonymous or synonymous. But this is wholly in accordance with Aristotle’s own practice. Nowadays it is usual only to talk about words as being synonymous, and then what is meant is that different words signify the same thing, or in the vocabulary that we have used so far: have the same definition. Today we call

14 Their most important property as homonyms is actually *non-discreteness*, where *discreteness* consists in the absence of definitional overlap. It is perhaps surprising that *accidentality* and *discreteness* in some instances go apart, but this is really the case. For example, as we shall see, an amputated leg and a ‘living’ leg are homonymously called legs, non-accidentally but discretely. It is no accident (i.e. it is by no happenstance of language) that an amputated leg is called a leg. Its visual resemblance with a real leg and its former occupation as a real leg explain this linguistic convention perfectly well. But being committed to a thesis of functional determination of kinds, Aristotle holds that the definition of the amputated leg—having lost its function as a leg—is completely distinct from the definition of leg, so that an amputated leg is discretely homonymously a leg. Even though there are some non-accidental discrete homonyms, *all* accidental homonyms are discrete homonyms. For more on the special case of non-accidental discrete homonymy see 2.1.4

‘homonymous’ words with different meanings but identical spelling.¹⁵ It is thus important to appreciate that Aristotle is primarily talking about things as homonymous or synonymous, even though he holds that these characterizations also pertain to words¹⁶, but then secondarily and on the basis of the nature of the things. In the cited passage from *Categories* this is obvious, as it is clearly not terminological definitions that are in question, but differences among the accounts of being for the different things with a common name. Aristotle is after *real definition* as opposed to mere *lexical definition*. *Real definition* amounts to essence specification. So when Aristotle claims that it is the nature of the things that grounds the homonymy (ambiguity) or synonymy of terms, he is committed to holding that what terms signify are extralinguistic things, namely real essences.¹⁷ This has dramatic consequences for Aristotle’s view on language possession. In his view one has to have a good share of empirical knowledge to be recognized as a fully competent speaker: One has to fully grasp the application conditions for the terms in one’s language, something which amounts to knowing the essences of the things referred to by the words one employs. To know the essence that is

15 Some translators have chosen to translate ‘homonymy’ and ‘synonymy’ into ‘equivocal’ and ‘univocal’ respectively, in order to avoid confusion with the contemporary use of the terms. Although I don’t see any problem with such a translation, I have chosen to stick with ‘homonymy’ and ‘synonymy’, both because they are appropriations into English of the Greek terms used by Aristotle, and because I think the introduction of these terms in the context of this study leaves no doubt about their technical meaning.

16 One place where this is evident is in *De Generatione et Corruptione* I 6, 322b29–32. As we shall see below, words are also explicitly treated as homonyms in *Topics*.

17 Essence is typically understood just to belong to substances and to be that which makes them be what they are. So one would perhaps wish to object at this point that only names of substances could signify essences and that only real definitions of substantial kinds could specify essences, whereas I seem to claim more generally that even property terms signify essences, something which could not possibly be the case since they denote non-substance categorial beings, which, as we know, don’t have essences. Again, as it is said, only substances have essences. It is surely true that essences are primarily and without qualification (ἀπλῶς) ascribed to substances, but Aristotle admits essences to qualities, quantities and other non-substance categories too, but then secondarily: ‘[E]ssence will belong, just as the “what” does, primarily and in the simple sense [ἀπλῶς] to substance, and in a secondary way to the other categories also,—not essence simply, but the essence of a quality or of a quantity’ (*Metaphysics* Z. 4, 1030a29–32). The essences of non-substance categorial beings will somehow depend on the essence of a substance, and this is the reason why the ascription of essences to them are *qualified*, as it is said in Aristotelian terms. The kind of dependency between primary and secondary essences are completely analogous to the dependency between primary and secondary kinds of beings (i.e. between substances and non-substance categorial beings), and there is a perfectly good reason for this, one which unfortunately is obscured in translation. A more accurate translation of Aristotle’s technical expression for ‘essence’ (τὸ τί ἦν εἶναι) would namely be ‘the what it is [for something] to be’ (or actually: ‘the what it was to be’, but where the imperfect ‘ἦν/was’ is used in order to designate the defining characteristic, *the way of being that continuously characterized* [this is the aspect brought forth by the imperfect tense] *and characterizes still* the thing in question with regard to itself [viz. the kind of being it is]). This particular use of the imperfect is sometimes classified as ‘philosophical imperfect’. See Frede/Patzig 1988, vol. 2, 35). As we thus see, we find in Greek a very close conceptual tie between being and essence: Essence is understood in terms of being. So Aristotle’s claim that essence is said in many ways simply follows from his famous commitment to the multivocity of being.

signified by a certain term, and thus to be a fully competent user of that term, can be described as having grasped the specific term's *deep meaning*. To not be fully competent in the use of a word, and thus be liable for example to confuse a homonym with a synonym (because of a failure to grasp the different accounts of being underlying the names), we can coin having grasped a term's *surface meaning*.¹⁸ Aristotle will need this distinction in order not to deem Plato, for example, an utterly incompetent speaker of Greek (a most unfortunate thing...), and in order to explain why some cases of homonymy are difficult to detect. The different layers of significance introduced by Aristotle correspond to his more familiar distinction between levels (or stages) of knowledge frequently appealed to in methodological contexts.¹⁹ The same object can be known more or less thoroughly, and it is the task of the researcher to aim at the most scientific of definitions for the object of study. For Aristotle this will be a definition that appeals to principles and causes, things more knowable in themselves and through which other things are known. This is the kind of definition that is 'more knowable in nature'. The scientific path towards such definitions yet unavoidably starts from preliminary accounts of the 'everyday understanding' of the objects at issue, what Aristotle calls ἔνδοξα, 'reputable opinions'.²⁰ Things are revealed in the reputable opinions, but not completely and fully. The definitions of things inherent in the reputable opinions are mostly correct, but they do not exhaustively explain the things they are supposed to account for, and for this reason they do not hold 'without qualification' (ἀπλῶς). There is more to be said of things than what is contained in the preliminary accounts and initial definitions of the 'common understanding', but this is not necessarily to claim that the common understanding gets things *wrong*, it is just to say that it is insufficient and incomplete.²¹ For even when the common understanding

18 For more on Aristotle on signification see chapter 3 in Shields (1999) and the chapters 4–6 in Charles (2000).

19 This distinction is reflected in his famous methodological mantra: '[We must] start from the things which are more knowable and clear to us and proceed towards those which are clearer and more knowable by nature' (*Physics* 184a16–18, cf. *Physics* 188b32, 189a5, *Nicomachean Ethics* 1095b2–4, 1098b3–8, *Topics* 141b4, 141b25, *De Anima* 413a11–16, *Posterior Analytics* 71b9–16, 71b32–72a)

20 Cf. *Nicomachean Ethics* 1145b2–7, where this scientific route, that takes departure *from* the reputable opinions about things in the way they normally present themselves, is clearly recommended.

21 Another way of putting this could be to say that to be able to state the 'scientific definition' of some term and thus being regarded as having grasped the *deep meaning* of that term coincides with being acquainted with the essence signified by the term under some sort of privileged guise/mode of presentation (and that we should understand the locution 'more knowable in nature' along these lines). When one has grasped the *surface meaning* of a term, on the other hand, one is only acquainted with the essence signified by the term under some other, less privileged, guise/mode of presentation.

plainly gets things wrong, it is almost always in an interesting way that nevertheless reveals something about the thing investigated.

To sum up our little detour: The connection between the depth of knowledge about an object and the understanding of the word that denotes that object can now be expressed in this way: Holding ‘reputable opinions’ about a thing suffices for grasping the surface meaning of the term denoting that thing, whereas a deeper understanding and a more scientific account of the thing is needed in order to grasp the deep meaning of the word.^{22 23}

2.3 Narrow or broad conception? The evidence from the *Topics* and beyond

When inspecting texts beyond *Categories* for evidence that might settle our question, we find that Aristotle in some places introduces homonyms that are compatible with the narrow conception of homonymy, but that he in other places clearly requires the broader conception. Since the broader conception includes the cases of homonyms without any definitional overlap, viz. the homonyms captured by the narrow conception, as special cases, the broad conception of homonymy seems to be Aristotle’s only viable option.

22 To see what a detailed realist interpretation of Aristotle’s view on signification would look like, as well as explorations of the connection between signification and scientific practice in Aristotle, see Charles (2000), Irwin (1982) and chapter 3 in Shields (1999).

23 The very brief treatment of Aristotle’s view on signification in this paragraph has in numerous ways involved simplification. One implication of what I have said here seems to be that only those names that signify, viz. are conventionally related to (to bring out a further aspect of Aristotle’s view on signification that have been left aside), essences, have meanings. But this is not so. Aristotle admits meaning to some terms which are not related to essences (viz. that lack references), but in these cases the names/terms in question must either (i) be compounds of other terms which on their part *do* signify essences (for example ‘goatstag’ and ‘gold mountain’), or (ii) be correlated with a complex thought whose contents are essences (under some mode of presentation). I have avoided the more laborious story of how words relate to the world *via* thoughts. Statements of the form ‘*x* signifies *y*’ (where *x* is a word and *y* is an essence) should be read as an abbreviation of ‘*x* signifies *y* by being a symbol of a thought (‘affection of the soul’) which is a likening (ὁμοιώματα) of *y*’. (Cf. *De interpretatione*, 16a3–8) A further investigation into these dimensions of signification would have to address the interesting statement on Aristotle’s part to the effect that it is the ‘forms’ of the objects of thought ‘without their matter’ which is present as the contents of thought. (Cf. *De Anima*, 429a13–17. See also 424a17–24 where the analogical case of perception is described.) Since forms and essences are the same for Aristotle (cf. *Metaphysics* Z, 1032b1: ‘By form I mean the essence of each thing’), his account of thinking interestingly illuminates his view on signification, viz. that terms signify essences.

Let us now have a look at some of these texts.

In *Topics* I. 15, Aristotle introduces different techniques for determining whether something is spoken of in many ways or in only one (πολλαχῶς ἢ μοναχῶς τῷ εἶδει λέγεται, 106a9). In the context of this work the detection of homonymy or multivocity (the terms are here used interchangeably!) has primarily a negative function as establishing lack of synonymy or univocity. The concern of *Topics* is to give an account of dialectical practice, or more precisely an account of how to reason skilfully, and homonymy is thus first and foremost treated as a possible source of fallacious reasoning (e.g. when homonymy has slipped into the premises of an argument unbeknownst to the disputant). It is notable that many of the tests for homonymy are explicitly linguistic. In the first test (106a10–22) Aristotle encourages us to see if the opposite of something is spoken of in many ways, and whether the divergence is in form or in word. For, as he points out, in some cases the differences emerge even in the words. In the case of sound, the opposite of sharp (ὀξύς) is flat (βαρύς), while in the case of bodies the opposite of sharp is blunt (ἀμβλύς). So, clearly, the opposite of sharp is spoken of in many ways. But, he proceeds, if this is so, then sharp too is spoken of in many ways, for the same sharp will not be the opposite of both flat and blunt. In a similar way, the opposite of fine (καλός) in the case of animal is ugly (αἰσχροός), whereas the opposite of fine in the case of a household is wretched (μοχθηρός), so that fine is homonymous. A variant of this test is to see if a term has an opposite in some uses but not in others (106a35). If this is the case the term in question is a homonym. (The emotion love does for example have hate as its opposite, whereas physical love lacks an opposite altogether.) In other cases linguistic tests do not suffice to establish homonymy, that is, it is not obvious from a difference in names that the opposite is spoken of in many ways. We say both with respect to light and to students that the opposite of bright is dim, but the bright light is luminous, whereas the bright student is intelligent. In this case there is ‘no divergence in names, but the difference in form is immediately quite obvious’ (106a23–25). Another test Aristotle invokes to detect homonymy is to see if two things sharing a name belong to different genera (which are not sub- or superordinate to one another). Since no two things can have the same account of being when falling under different genera,²⁴ a demonstration of membership in different genera will suffice to establish that two things are homonymous. Another non-linguistic test for homonymy that is advocated in *Topics* I. 15 is a test based on sense perception. Things belonging to the same sensible kind are perceived by the same

24 Obviously, since definitions are given by genus and specific difference.

sense. Since bright colours are perceived by the special sense sight, and bright sounds are perceived by the special sense hearing, being bright is not the same for colours and sounds, and ‘brightness’ is predicated homonymously of these various sensations (106a29–32). I will not go through all the numerous tests for detecting homonymy or how many ways something is said that Aristotle presents in this chapter, but a brief mentioning of a few more representative ones will hopefully, in addition to those already sketched, suffice to give a good outlook on the characteristics of the homonymy-detecting strategies invoked by Aristotle. The first two that I will examine is a test of the possibility of comparison (107b13–18) and a test for the existence of an intermediate (106b4–8). Synonymous things are comparable, so the impossibility of comparison indicates non-synonymy. Both a sword and a sarcasm can be sharp, but it is impossible for a sword to be sharper than a sarcasm. ‘Sharp’ is thus non-synonymously applied on swords and sarcasms. The test of the existence of an intermediate, on the other hand, asks of us to see if a word pair that has an intermediate in some uses lacks an intermediate (or has a different one) in other uses. If so, the word pair under consideration is applied non-synonymously across these cases. The example Aristotle gives does not translate well into English (something which is symptomatic for many of the linguistic tests),²⁵ but since I haven’t been able to dream up a better one, I will present his. ‘Bright’ (λευκός) and ‘dark’ (μέλας)²⁶ have ‘grey’ (φαιός) as their intermediate when they are said of colours, but lack an intermediate altogether when they are said of sounds, if one is not willing to accept ‘muffled’ (σομφός), that is. This shows that ‘bright’ and ‘dark’ are homonymous. The fact that ‘bright’ and ‘dark’ in the case of colours have numerous intermediates, namely all the other colours,²⁷ whereas they at most have one (‘muffled’) with regard to sound, also indicates that ‘bright’ and ‘dark’ are used homonymously. (106b4–13)

In addition to the above treated things (or terms) that have revealed themselves as homonymous through the tests in *Topics* I. 15, i.e. sharp, fine, love, bright and dark, Aristotle enumerates several others amongst which we find pleasure, seeing, perceiving, just, health, good, balanced, and colour. In our aim to delineate the borders of Aristotle’s

25 Some of the tests do not translate at all, and mostly when this is the case, or when a satisfactory translation is hard to facilitate, the tests just detect pure accidents of language, what we hitherto have called *accidental homonyms*.

26 ‘White’ and ‘black’ are the best translations into English of λευκός and μέλας when colours are the subject, but in order to make Aristotle’s example work, I have here chosen ‘bright’ and ‘dark’.

27 This is probably something that most people today are not willing to accept, and thus depends on a Greek (or at least Aristotelian) theory of colour, in which all the colours are understood to belong in a spectrum between black and white.

conception of homonymy, we do wisely also to look at some of these alleged homonyms more closely. Whereas many of the homonyms mentioned above are clearly so-called accidental homonyms without anything definitional in common (examples of which are: sharp, bright and dark), and thus are compatible with the narrow conception of homonymy, others are obviously definitionally related and demand the broader conception. Let us consider two of them, ‘seeing’ and ‘healthy’. We will consider ‘seeing’ first. Aristotle says that when the contradictory, i.e. the negation, of a term is used in many ways, the term itself must also be used in many ways. ‘Not seeing’ (τὸ μὴ βλέπειν, 106b15) is both used of the situation in which people lack the capacity to see entirely and the situation in which people fail to exercise the capacity to see. Therefore, when reporting that a person doesn’t see one can either mean that the person in question is blind or that he, for some reason or other (tiredness, distraction, blindfoldedness, etc.), fails to actively exercise his capacity to see. The homonymy of ‘seeing’ (and of course the other inflections of the term) is not so easily appreciated as that for ‘not seeing’ simply because ‘seeing’ does not have such widespread intransitive use as ‘not seeing’. The ambiguity of ‘seeing’ is in a way concealed by the fact that the term most of the time has an object (e.g. ‘see the bullfight’, ‘see the bridge’). We are in any case easily brought to acknowledge the different sayings of ‘seeing’ through the demonstration of the different sayings of ‘not seeing’. With regard to the homonymy of ‘not seeing’ (and consequently ‘seeing’), in contrast to the likes of ‘sharp’ and ‘bright’, it is clearly not the case that the instances are definitionally unrelated, or that the states denoted by the word ‘seeing’ have wholly different accounts of being: The capacity of sight is present in the account of being for both kinds of seeing. —The first way to see is constituted by the having of the capacity sight, whereas the second way is constituted by the exercising of that capacity. The state of actually employing or exercising one’s sight seems here to be accounted for or made sense of on the basis of the notion of capacity. On the other hand, capacities are generally accounted for with reference to activities in the work of Aristotle. He holds that capacities (or in more familiar technical jargon: potentialities/potencies) in some way or other are definitionally and in being what they are dependent on activities (or actualities) (προτέρα ἐστὶν ἢ ἐνέργεια καὶ λόγῳ καὶ τῇ οὐσίᾳ; ‘actuality is prior both in formula and in substance’ *Metaphysics*, 1049b11. Cf. *De Anima* 415a18–20).²⁸ The capacity of sight is defined through an activity: seeing-at-work. Whether or not it is the case that ultimate reference is made to

²⁸ For the present purpose I treat ‘capacity’, ‘potency’ and ‘potentiality’ as equally good translations of δύναμις, and both ‘activity’ and ‘actuality’ as valid translations of both ἐνέργεια and ἐντελέχεια.

the capacity of sight or the activity of seeing in the accounts of the different ways of seeing, the definitions are incontestably closely connected.

Let us now move on to the other homonym that I announced we should have a closer look at, and that likewise has related or overlapping definitions in its different sayings, namely ‘healthy’. One of the places in which ‘healthy’ is introduced as an example of homonymy in the now familiar chapter from the *Topics* is after a warning that ‘[o]ften in the actual accounts as well homonymy creeps in without being noticed’ (107b6–7), and that we therefore ought to inspect the accounts as well. If someone for example should claim that both what is indicative and productive of health has *balance* with respect to health, one should not rest with this explanation, but instead inquire in what way balance is said in the different cases. If balance in the first case is meant to characterise a state of such a kind as to be liable to produce health, whereas balance in the second is a state indicative of the presence of health, then balance is homonymous in the different accounts and thus makes the things (or words) to which the accounts are given themselves homonymous. This test is not the only one involving ‘healthy’ in the chapter, and it is interesting to see how close Aristotle’s explanation—or at least the outline of one—of the homonymy of ‘healthy’ here is to his far more famous demonstration of the multivocity of ‘healthy’ in the philosophically weightier context of *Metaphysics* Gamma 2. In our chapter in *Topics* he states that things that produce, preserve and indicate health all are healthy (106b35–36), and the reason for this seems to be (though not explicitly enunciated) that all these different states stand in some kind of relation to health itself, viz. a state (of proper functioning) potentially present in an organism. In *Metaphysics* Gamma 2 the different healthy things are so called because of their relation to one thing (πρὸς ἓν, 1003a33) and one source (μίαν ἀρχήν, 1003b6): health. —A diet is healthy insofar as it preserves health; an hour at the gym is healthy insofar as it produces health; a nice tan is healthy insofar as it is an indication of health; and a natural organic body is healthy insofar as it is capable of receiving health. If health is to be characterized as a state of perfect functioning for an organism, it seems that it is organisms such as trees, animals and humans that are healthy in a primary sense, whereas all other things are healthy just in case they stand in the right sort of relation to this state of health in the organism. The claim of both *Topics* and *Metaphysics* is that healthy is said in many different ways and of different objects, but since the accounts of being for each and every one of the healthy things make reference to health (one thing and one source), the accounts overlap—they are not completely distinct and unrelated—and thus ‘healthy’, if it is to be regarded as a homonym

(something it clearly is in *Topics*), needs the broad conception of homonymy.

Despite the interchangeable use of multivocity and homonymy, and the enumeration of homonyms with overlapping definitions together with homonyms which are so-called discrete without anything definitional in common, that all of which point in the direction of the broad conception, the recent evocation of the notorious place in *Metaphysics* Gamma 2, can nevertheless immediately make us doubt this conclusion with its ‘said in many ways ... and not homonymously’. What are we to make of this?

In *Nicomachean Ethics*, when discussing the ways in which the good is said, Aristotle asks: ‘[I]n what way are things called good? They do not seem to be like the things that are homonymous by chance [ἀπὸ τύχης ὁμωνύμοις]’²⁹(1096b26–27). By saying ‘homonymous by chance’ Aristotle seems to imply that there are also such things as non-chance, i.e non-accidental, homonyms, and that the good things are candidates for being such. What is otherwise the point in making such a qualification? If Aristotle then acknowledges the existence of homonyms that have something definitional in common in addition to the accidental homonyms—things that just happen to have the same name without anything definitional in common—could it be that what he really wants to do in Gamma 2 is to contrast the multivocity of ‘being’, ‘medical’ and ‘healthy’ with accidental homonymy and not homonymy as such, and that he should—if he were to express his view with maximal expository clarity—have made it clear that it is just the *accidental* homonyms that are to be contrasted with the πρὸς ἑν-
multivocals? I believe that is the case. In the seventh book of *Eudemian Ethics* we find a very similar statement regarding homonyms which also seem to imply that not all homonyms are unrelated and have the same name merely by chance. The subject under investigation is friendship, and in the course of the exploration of this phenomenon, we are told that there are three kinds of such. But, Aristotle proceeds, even though there are different kinds of friendship, they are, just as is the case with the medical, not ‘wholly homonymous’ (πάνπαν ὁμωνυμῶς, 1236a17). The reason for why they are all correctly called friendships—and here follows a now familiar sort of explanation—is that they are all related to one that is primary (or is itself the primary). The expression that is used here, ‘wholly homonymous’, does not only seem to imply a recognition of homonyms that are in some way related in addition to the accidental ones, but also that the degree of closeness and relatedness among homonyms vary. This is something that is explicitly

29 Slightly modified Oxford translation.

admitted in *Nicomachean Ethics* V. 1, where different instances of justice and injustice are said to be so closely (σύνεγγυς) homonymous that it often escapes notice. (1129a26–28) The talk of some homonyms being close, indeed so close that their homonymous character escapes us, is very significant for our project of delineating the scope of Aristotle’s conception of homonymy. This kind of talk would be altogether inexplicable if Aristotle only regarded discrete homonyms as homonyms. For how can homonyms without anything definitional in common be close to each other? Besides, it seems implausible that different cases of justice should have no definitional overlap. In *Physics* VII. 4 Aristotle elaborates his view on the varying degrees of relatedness among homonyms: ‘[S]ome homonymies are far removed from one another, some have a certain likeness, and some are nearly related either generically or analogically, with the result that they seem not to be homonymies though they really are.’³⁰ (249a23–25) Only the broad conception of homonymy can reasonably be seen to handle all the various kinds of homonymy described in this passage. That some homonyms can be hard to distinguish and thus are easy to overlook is something we have seen Aristotle point out earlier, e.g. in his treatment of ‘healthy’ in *Topics*. And there are even more similar places in the corpus. In chapter 7 of *Sophistici Elenchi* Aristotle gives ‘one’, ‘being’ and ‘sameness’ as examples of homonyms that are difficult to distinguish (169a22–25), and in chapter 33 in the same work he writes:

[J]ust as in fallacies that depend on homonymy, which seem to be the silliest form of fallacy, some are clear even to the man in the street (for humorous phrases

30 What exactly is meant by Aristotle when he says that homonyms can be nearly related either generically or analogically is of course a very interesting question, but a question that I nevertheless will have to steer clear of for the time being. I will only use the citation to support the claim that Aristotle holds that homonyms can be both closely related and clearly distinct. What I perhaps ought to do in connection with this excerpt from *Physics*, however, is to make a warning. By the use ‘analogically’ in the excerpt some readers are perhaps inclined to think of the understanding of analogy in medieval philosophy, and ask themselves if what I have called associated homonymy is not really analogy and why the discussion so far has not treated this concept. Medieval philosophers under the influence of Aristotle, notably Thomas Aquinas, in fact used analogy, or more specifically *analogia attributiones*, for what I have called associated homonymy or πρὸς ἓν-multivocity. Even though the medieval concept of analogy stems from πρὸς ἓν-multivocity in Aristotle’s philosophy, no textual support can be given to the assumption that analogical and πρὸς ἓν-multivocal predication are the same for Aristotle. What ‘analogy’ consistently signifies in Aristotle is what is called *analogia proportionalitatis* in medieval philosophy: ‘For proportion (ἀναλογία) is equality of ratios, and involves four terms at least [...] e.g. as the term A, then, is to B, so will C be to D.’ (*Nicomachean Ethics* 1131a31–b6, with omission) So, one should not, regardless of what traditionally has been done, use ‘analogy’ for associated homonymy. For more on the relation between Aristotle and medieval philosophy see chapter 4 ‘Analogy in Aristotle’, in Rocca (2004). Regarding the shift in the conception of analogy Rocca writes: ‘According to Pannenberg, Avveros was the first to make analogy a mean between univocity and pure equivocality, identifying *analogia* in its older meaning of *proportio* with the Aristotelian *pros hen* equivocal, which entails a term’s being predicated *per prius et posterius* by means of a relation of dependence.’ (Rocca 2004, 90–91)

nearly all depend on diction [...]), while others appear to elude the most expert.
(182b13–22)

From the examples and citations above we see that Aristotle's attitude towards homonymy remains remarkably consistent from early works such as *Topics* and *Sophistici Elenchi* to later ones such as *Physics* and *Nicomachean Ethics*. In all of them Aristotle is eager to warn us against overlooking hard-to-detect homonyms, and he clearly separates them from the accidental ones, those out of which jokes are made and which are obvious to just about anyone. This is impossible to reconcile with Aristotle holding that the class of homonyms exclusively consists of discrete homonyms. If this were the case it would make no sense for Aristotle to warn against overlooking some homonyms. As we can see from his discussions of among others the homonymy of 'healthy' and 'seeing' from *Topics*, Aristotle acknowledges multivocals/homonyms with overlapping definitions in his early philosophy, and his explanation for the homonymy of 'healthy'—that the different healthy things are so called because of their various relations to health itself—is, even though it lacks a bit in precision and specificity compared to the account in Gamma 2, at least basically the same. The explanation in *Topics* could be regarded as the skeleton of the fleshed out explanation of $\pi\rho\delta\varsigma$ $\tilde{\epsilon}\nu$ -multivocity in Aristotle's later philosophy, of which *Metaphysics* Gamma 2 provides an example. And just as nothing distinguishes homonymy and multivocity in *Topics*, we should likewise recognize that no separation of homonymy and multivocity is intended in *Metaphysics* either, and that the $\pi\rho\delta\varsigma$ $\tilde{\epsilon}\nu$ -multivocals consequently are subsumed under homonymy also here (as associated homonymy, that is). Aristotle's recurring insistence throughout all his philosophy—both in the mature philosophy of *Physics* and *Nicomachean Ethics*, and in the early philosophy of *Topics* and *Sophistici Elenchi*—of the closeness of some homonyms, and the difficulty involved in detecting them in such cases, is another indication that there is no shift in Aristotle's general conception of homonymy from his early to his late works. He consistently accepted both accidental and related homonymy, and thus held the distinction between synonymy and homonymy to be exhaustive—perhaps contrary to what the troubling sentence from Gamma 2 leads us to believe. Accordingly, we can safely assign to Aristotle the broad conception of homonymy at any time in his philosophical career.

2.4 The special case of non-accidental discrete homonymy

From the bulk of excerpts hitherto explored in which Aristotle treats homonymy, one can get the impression that all discrete homonyms are obvious and easy to recognize, and that only the associated homonyms are philosophically interesting. The kind of examples that Aristotle uses to illustrate discrete homonymy (that equal such English words as ‘crane’, ‘key’, ‘organ’ and ‘bank’) contributes to this. They are obvious and accidental ones; ‘the sort out of which jokes are made’.³¹ This is unfortunate, for there are actually some discrete homonyms that are still non-accidental. Some things without anything definitional in common have nevertheless non-accidentally (viz. by no mere coincidence of language) the same name. As with associated homonyms, the homonymy in these cases is difficult to detect. We find two of the most famous examples of such non-accidental discrete homonymy in the first chapter of book II in *De Anima*. One involves an artefact, and the other a body part. Aristotle has at the relevant stage in the chapter just given a general account of his hylomorphism, and proceeds with comparing an ensouled body (a paradigmatic instance of a hylomorphic compound) with a functioning axe:

We have now given a general answer to the question, What is soul? It is substance in the sense which corresponds to the account of a thing. That means that it is what it is to be (τὸ τί ἦν εἶναι) for a body of the character just assigned [i.e. natural organized body]. Suppose that a tool, e.g. an axe, were a natural body, then being an axe would have been its essence (οὐσία), and so its soul; if this disappeared from it, it would have ceased to be an axe, except in name (ἀλλ’ ἢ ὁμωνύμως). (412b10–15)

What Aristotle argues here is that if an axe should lose that which makes it an axe, let’s call it its axe-ity, and is for this reason no longer able to do whatever it is that axes do, it is not an axe any more. This can happen in various ways. An axe can lose its ability to

³¹ Here are some examples of English jokes which exploit the discrete homonymy of ‘clubs’, ‘practise’ and ‘institution’ respectively: ‘Do you believe in clubs for young people? Only when kindness fails’ (W. C. Fields); ‘Does your uncle still practise dentistry? No, he finished practising. He does it for a living now’ (Unknown origin); ‘Marriage is a wonderful institution, but who wants to live in an institution?’ (Groucho Marx, in *Animal Crackers*)

function as an axe both for reasons external to its structure (e.g. if it is meticulously hidden away or if the practice of chopping wood becomes extinct) and for reasons internal to its structure (e.g. because of massive corrosion of the metal in the axe-head or disintegration of the handle). If then the internal constitution of an axe decays to the extent that the axe can no longer be used as an axe (but also, I presume, if a certain form of human practice collapses, since the function [ἔργον] of a tool seems to depend on some specific human activities), it is not an axe anymore, except homonymously (ἄλλ' ἢ ὁμωνύμως). For, the account of being for an axe that is only homonymously an axe will not make appeal to what it is to be an axe, since to be an axe *proper* is to be an artefact that is suitable for chopping.

One could perhaps be inclined to believe that an axe and a former axe would somehow be related, and that the account of an axe that is unsuitable for chopping would have to make reference to the account of what it is to be an axe. But this is not Aristotle's view. Based on the conviction that essences of things are functionally determined, he holds that an object that cannot fulfil the function of an axe (i.e. cannot chop) does not really qualify as an axe at all.³² But, even so, Aristotle admits that it can be conversationally legitimate, or at least excusable, to call a more or less dissolved axe—say a specimen from the middle ages on display in a museum—an axe, even though it does not have the essence of axe-ity and is thus not strictly speaking an axe anymore. That a wrecked axe is an axe only homonymously and not strictly is at any rate not as obvious as the case of a blood-pumping organ and the organ of Notre Dame being homonymously organs. It is not by a mere accident of language that the different axes share the same name, although, on the assumption that the axe in the museum is no longer functional, the account of the museum piece is totally distinct from the account of a functioning axe. 'Axe' is then a non-accidental but discrete homonym. In the similar example immediately following the one involving the axe, Aristotle applies his hylomorphism to a part of a living body, the eye:

Next, apply this doctrine in the case of the parts of the living body. Suppose that the eye were an animal—sight would have been its soul, for sight is the substance of the eye which corresponds to the account (οὐσία ὁφθαλμοῦ ἢ κατὰ τὸν λόγον), the eye being merely the matter of seeing; when seeing is removed the eye is no

³² The firmness of the assertion with regard to this case does of course interestingly address the question: What kind of a relation *is* necessary and sufficient for associated homonymy, since this one clearly is not? We will have to let this question rest for now, but will take it up again in part 2.2, where the grounds for the association of some homonyms are more thoroughly explored.

longer an eye, except in name (πλὴν ὁμωνύμως)—no more than the eye of a statue or of a painted figure. (412b18–22)

Aristotle's point here is that an eye incapable of seeing does not have the account of being of an eye. An eye bereft of sight is not an eye, except homonymously (πλὴν ὁμωνύμως). But, just like the case with the broken axe in the former example, Aristotle grants that for practical reasons one can continue to call an eye without sight an eye even though it strictly speaking isn't an eye. Because it lacks the essence of an eye, namely sight, and thus is incapable of doing what it is that an eye does, that is to see, the sightless eye is not really an eye. But again, similar to the situation with the malfunctioning axe, that a blind eye and a properly functioning eye are eyes only homonymously is not something that is obvious to just about anyone, and Aristotle does not pretend that it is so either. As he often does when confronting a case of non-obvious homonymy, Aristotle compares the difficult-to-detect case with an obvious case, hoping to move us to acknowledge the first on the basis of the highlighted similarities with the second. With unwavering certainty he declares that an eye without sight is no more an eye than a sculpted or painted eye, for the account of being for an eye has no more application to it than to these other two.³³ The functioning eye and the blind eye have nothing definitional in common, but they are not as clearly homonymous as keys and organs, and it is not a mere happenstance of language that they share the same name. The two different eyes are non-accidentally but discretely homonymous.

We have seen Aristotle claim that bodies and body parts bereft of their functions are not bodies or body parts any longer, except homonymously, that is: in name only. One is nonetheless (for some yet unarticulated reason) permitted—at least in some contexts—to call them by these names. The name does not *really* apply to them though, for they are not instances of the kind denoted by those expressions. Aristotle obviously thinks that it is worthwhile to stress that detached fingers and dead bodies are only homonymously fingers and bodies, but what philosophical mistakes can follow from overlooking them? And what is Aristotle's argument in favour of the claim that a detached finger is a finger only in name?

³³ Aristotle aligns dead bodies and detached bodily parts with painted and sculpted bodies and body-parts in numerous other places as well. See *Meteorologica* 389b25–390a13; *Politics* 1253a19–25; *Parts of Animals* 640b30–641a6; *Generation of Animals* 734b25–27. The locutions 'x isn't *F*, except homonymously' (πλὴν ὁμωνύμως) and 'x isn't *F*, but rather homonymously' (ἀλλ' ἢ ὁμωνύμως) appear in abundance in these places.

Aristotle's argument for the existence of homonyms of the above described kind—non-accidental discrete homonyms—involves a thesis of central importance to him about kind individuation, namely that kinds are *functionally determined*. As we shall see, it is as a consequence of this thesis that Aristotle is bound to consider non-functioning specimens of a kind to be mere homonyms, and not genuine instances of the kind in question. Let us examine more closely this thesis and its implications for Aristotle's view on homonymy.

All the non-accidental discrete homonyms presented above are such that they at one time are genuine *F*s and at another time are bogus *F*s. They cease to be genuine *F*s but continue to retain the outward form or appearance of genuine *F*s.³⁴ In these cases we can see that it is not by a mere happenstance of language that the different things are called *F* even though their accounts are discrete. It is because we are so accustomed to calling a thing with a certain look an *F*, that we continue to do so even when it is no longer a genuine *F*. Perhaps we do not even know that it is not a genuine *F*. The threat of making mistakes in philosophical contexts thanks to a failure to distinguish genuine from bogus instances of a kind seems to be Aristotle's motivation for stressing the homonymy in these cases. Mistakes involving a confusion of a non-accidental homonym may not be as grave as mistakes based on a confusion of an associated homonym, and the philosophical consequences may not be as severe, but they will nevertheless be mistakes. So, what grounds Aristotle's distinction between genuine *F*s and homonymous *F*s? As I have already said, Aristotle holds a thesis of functional determination for kind membership and individuation, and it is simply as a consequence of this that he must regard detached fingers and dead bodies as bogus instances of the kinds *finger* and *body* respectively. We find a formulation of this thesis in *Politics* I. 15. Here Aristotle refers to his view about the homonymy of non-functioning body parts in a discussion of the priority of the polis over the family and the individual, and clarifies it by placing it within a general account of kind individuation:

Further, the state is by nature clearly prior to the family and to the individual, since the whole is of necessity prior to the part; for example, if the whole body be destroyed, there will be no foot or hand, except homonymously, as we might speak of a stone hand; for when destroyed the hand will be no better than that. But things

³⁴ 'Outward form or appearance' should be understood as what Aristotle sometimes calls *σχῆμα* in contrast with *μορφή* or *εἶδος*. (Cf. *Physics*, 193b7–12.)

are defined by their function and power (πάντα δὲ τῷ ἔργῳ ὥρισταί καὶ τῇ δυνάμει); and we ought not to say that they are the same when they no longer have their proper quality, but only that they are homonymous. (*Politics*, 1253a19–25)

The claim here is that things that are just homonymously *F* (in the way we are interested in here: non-accidentally and discretely) are such because they lack the function or power associated with being an *F*. To recirculate an old example: an axe that is no longer suitable for chopping, and has thus lost its function, is not really an axe any more. The function of an object is identified with the ‘proper quality’ of an object, the quality that makes it the object it is. In the case of the finger, its function or proper quality will be something like *contributing to the functionality of the hand*. This would in turn be specified, I suppose, as a capacity to perform certain kinds of operations (handing, giving, shaking, sending etc.) in the interest of the organism to which it is a part. But the specific functions for the particular kinds of objects, viz. what individuates the particular objects, shall not occupy our attention. More important is the general account of kind individuation. Regarding it we should notice its scope and strength. It says that *all* things are defined by their function, and that a thing will be defined as an *F* just in case it has the function and power of a genuine *F*:

Functional determination (FD): An individual *x* will belong to a kind or class *F* iff: *x* can perform the function of that kind or class.³⁵

The thesis states that having a function definitive of being *F* is both a sufficient (‘if *x* can perform the function definitive of being an *F*, then *x* is an *F*’) and necessary (‘if *x* cannot perform the function definitive of being an *F*, then *x* is not an *F*’) condition for being a member of the kind *F*.

FD seems at least to perfectly state the individuating conditions for all kinds of artefacts. Take a bed for example. What is it that makes a bed the artefact that it is? The obvious answer is that it can perform the function of bed, namely that it is suitable to sleep in. Likewise for bread knives, chairs, lights and footballs. What makes these the artefacts they are seems to be that they can fulfil specific functions, which in their cases

³⁵ This formulation of the thesis is taken from Shields (1999), page 33.

are that they can be used for definitive purposes: to cut bread, to be suitable to sit on, to illuminate, and be applicable in the game of football respectively. What they are made of and how they look does not matter. As long as they can perform the function associated with a certain kind of artefact, they are rightly reckoned as a true instance of that kind of artefact. Different chairs have hugely different outward appearances and are composed out of remarkably different stuffs (e.g. plastic, mahogany, titanium), but what unites them all into one kind is that they are all suitable to sit in. That they can fulfil this function is *sufficient* for them to fall under the kind *chair*. That it is *necessary* for the objects to fulfil a specific function in order to be a certain type of artefact also seems right. A paper installation that has the perfect appearance of a chair, but that will break apart as soon as someone tries to sit in it, will not qualify as a chair. Neither will a rotten armchair disintegrating under the weight of an unlucky man aiming for rest. The same is true for a rubber knife or a broken lamp. If they are not able to fulfil the function associated with the respective artefacts, they do not *really* count as instances of them, and are only called chairs, knives and lights either because they have the outward look of these kinds of artefacts or because they previously were in a state compatible with performing the relevant functions. It may even be that a broken yet reparable specimen of some artefact will (homonymously) be called by the name of the artefact as much because it can easily be brought back into functioning again as because it previously fulfilled the function associated with the specific kind of artefact. The fact that we would judge a hotel receptionist who says that a room furnished with a broken lamp and the remnants of a chair ‘certainly contains a light and a chair’ to speak falsely, or at least very misleadingly, also seems to indicate that the necessary condition for kind membership expressed in FD is befitting for artefacts. In the light of the above clarifications, Aristotle’s view that artefacts only count as such when they fulfil specific functions certainly has a ring of plausibility to it.

One might respond to this by saying that it is certainly no surprise that artefacts, that after all are manmade and meticulously designed for some definitive purpose, are functionally determined, but that FD is much more dubious as a thesis concerning for example natural kinds. Aristotle’s thesis has to encompass these as well since it is explicitly supposed to hold for *all* things. A modern essentialist who identifies water with H₂O will not automatically count as water everything that exhibits the macroscopic properties of water, or even to a deep level of analysis can fulfil the functions associated with water. When the modern essentialist thinks of water as H₂O, he thinks of it as compositional rather than functional stuff, and it can seem that

Aristotelian essentialism, in which essence is identified with function, does not neatly fit essentialism grounded upon compositional stuff.³⁶ But this is because one imagines that different kinds of compositional stuff can instantiate the same functional kind, for example that H₂O and some other compositional kind, say XYZ³⁷, both can perform the functions we normally associate with water, that is, that they can both be floating, drinkable, freezable etc. If we regard water as a functional kind, then we will in this case have two compositional kinds instantiating one functional kind. We have seen that Aristotle holds that artefacts, ποιούμενα, the paradigmatic instances of functional kinds, can be composed of vastly different compositional stuff. But he does not need to hold that the same is true for natural kinds, the φύσει ὄντα.³⁸ He does not need to believe it metaphysically possible that something to a deep level of analysis can fulfil the functions normally associated with water without being water. If Aristotle rejects this possibility, he can counter the modern essentialists by saying that all compositional kinds are also functional kinds, and consequently that all kinds can be regarded as functional kinds. Compositional kinds will in this perspective be the hyletic foundation or material correlate to some specific functional kind.³⁹ But like matter in form-matter compounds generally, the ‘compositional kind’ is both explanatorily and ontologically posterior to the functional kind. To put it in Aristotelian terms: It is because the substance in question is water that it is composed of H₂O, and not the other way around (viz. ‘it is water because it is composed of H₂O’). But anyway, even if this outlined Aristotelian response to the modern essentialists should prove futile and the existence of different compositional kinds that are functionally indiscernible were demonstrated, Aristotle would have shown strikingly little interest in them. For him essence is

36 Modern essentialists will charge Aristotle for failing to acknowledge the difference between functional kinds and functional specifications of kinds which either are, or are not, functional kinds. The essences of functional kinds are exhausted by their functions, whereas this does not hold for essences of compositional kinds. Chlorophyll can be functionally specified as *the substance that makes leaves green*. But, they will claim, we should not on this ground treat chlorophyll as a functional kind.

37 I am of course here alluding to Hilary Putnam’s famous Twin Earth thought experiment (Putnam 1973) that boosted the revival of essentialism in contemporary metaphysics.

38 An indication that he in fact does not, can be found in *Metaphysics* Z, 11: ‘[T]he form of man is always found in flesh and bones and parts of this kind’ (1036b3–4). A claim to the extent that the forms of natural things *cannot* be realized in different kinds of material, viz. that they *cannot* be

39 Cf. *De Anima*, 403a29–b5: ‘Hence a physicist would define an affection of soul differently from a dialectician; the latter would define e.g. anger as the appetite for returning pain for pain, or something like that, while the former would define it as a boiling of the blood or warm substance surrounding the heart. The one assigns the material conditions, the other the form or account; for what he states is the account of the fact, though for its actual existence there must be embodiment of it in a material such as is described by the other. Thus the essence of a house is assigned in such an account as “a shelter against destruction by wind, rain, and heat”; the physicist would describe it as “stones, bricks, and timbers”; but there is a third possible description which would say that it was that form in that material

inevitably functionally determined, and an answer to a ‘what is it’-question that just involves a material description would for him be wholly unsatisfactory, and would not make us understand what kind of object we have at hand. Even though H₂O and XYZ *ex hypothesi* are distinct compositional kinds, Aristotle will nevertheless, on the ground of their functional indiscernibility, treat them as the same kind with the same essence. In Aristotle, function always trumps composition in kind determination.

But, let’s get back on track. FD, which Aristotle claims holds for both artefacts and (perhaps more problematically) natural kinds, requires that we treat *F*s whose accounts differ from the accounts of genuine *F*s as *bogus* or *non-genuine* exemplars of the kind in question. In contexts in which nothing deeply philosophical is at stake, or one for some other reason does not demand absolute precision in talk and conduct, one is nonetheless permitted to call some part of stone sculptures and some chopped off bodily parts by the name ‘hand’ because of their distinctive outward look, even though they either no longer satisfy the criteria for membership in the relevant kind, or should happen to be a mere representation of some object of the kind. In these cases Aristotle would say that the instances are only homonymously *F*s, and what he thereby implies is that they fail to qualify as genuine *F*s. They fail to qualify as genuine *F*s because they cannot perform the functions associated with being an *F*. In less slack circumstances on the other hand, for example in a discussion of what it is that constitutes the life of some particular organism, and where precision and strictness is wanted, we should *not* allow ourselves such loose talk. Some examples involving non-functioning bodies and detached bodily parts nicely illustrates how the homonymous character of some things only become ‘visible’ in philosophical or other highly theoretical contexts, whereas they are totally overlooked in everyday contexts. Take the homonymy of ‘body’. To insist that a corpse lifted out of a river is really not a body would probably be reckoned as both disrespectful and tasteless, towards both the dead person himself and his next of kin. It is proper to refer to the corpse as a body in this case, and to do something else would seem out of place and as a token of insensitivity, if not bestiality. Consider another case, a paralysed person. Wouldn’t it be a terrible insult to say that he has no legs? And, disregarding the potential insult, is it really the case that he has no legs? Is this what Aristotle want us to believe? In all these described cases it is perfectly natural, and in fact proper, to use the names ‘body’ and ‘leg’ even though the objects referred to do not really qualify as such. That they don’t really qualify as such, however, is something that eludes most people in most everyday contexts. In fact, that the things in question are merely homonymously bodies and legs and that they should not in a strict sense be

regarded as such is only evident from within a more scientific approach to the relevant things than the normal everyday involvement with them. Only when one inquires what it is for a body to be a body or what it is for a leg to be a leg will one come to realize that a dead body or a paralysed leg are only homonymously a body and a leg. For being a body, according to Aristotle, essentially involves having life potentially in it, and a corpse does certainly not have life potentially in it.⁴⁰ Regarding what it is for a leg to be to what it is, Aristotle's view is that to be a leg essentially involves contributing to the functionality of a living organism, something a paralysed leg all too obviously does not. Someone who thinks it implausible or even ridiculous that a leg should not be a leg anymore just because it is chopped off or a bit floppy, will most likely try to account for the inclusion of the object under the kind *leg* in terms of composition: A leg is a material thing composed of muscles, bones, tendons etc., structured in such and such a way. But this account involves a mentioning of structure, and how should we evaluate in a particular case whether the structural requirements for kind inclusion is met? The most obvious candidate would be to allude to functions, but then a strict compositional

40 That is, an *organic* body does essentially have life potentially in it. Aristotle's distinction between organic and non-organic bodies makes it possible for him to account for the death of an organism as a change that some object undergoes. It is important to appreciate that it is not the organism, for example a human body, *qua* organism that undergoes the change. Rather something changes from being a organic body to being a non-organic body, and this cannot be described as a change from being for example a finger to being a dead finger. This is because the finger is not preserved through the change; the change is not something that happens to the finger: when the finger loses its function, its part in the life of the organism, it is no longer a finger; it is a non-organic body part with the outward look of a finger. In the light of the distinction between organic and non-organic bodies and body parts, we can now make a little clarification with regard to the status of corpses. It is not strictly true that they are not bodies, for they are non-organic bodies. But they are in any case not *human* bodies (since they are not organic bodies). This specification does not alter the validity of the above described scenarios, since what the foes of an application of FD on natural kinds would insist is precisely this, that the corpses are human bodies. We have here seen that Aristotle holds that the organic body, the matter for the soul in the hylomorphic compound *man*, changes into a non-organic body when the soul, the source of life and change for the hylomorphic compound, is somehow destroyed. In the case of substantial generation, the situation is analogous. The matter out of which the hylomorphic compound *man* is generated, is not an organic body. It is only an organic body from the moment it is ensouled. In other words, the proximate matter does not persist through the substantial generation of a man. It is some other matter—which is potentially proximate matter—that underlies the generation and out of which the ensouled body is realized. (The proximate matter is realized at the moment of the beginning of the activity of the soul.) (Cf. *De Generatione et Corruptione* I 4, 319b23–24.) To further complicate matters, it should be noted that because some non-organic bodies are potentially organic bodies, they are in *one* sense natural bodies having life potentially in them. But we must in this case be careful to distinguish the way these bodies are potentially alive from the way natural *organic* bodies are potentially alive, for 'potentially' is used homonymously—it is said in two ways—with regard to these bodies. The potentiality ascribed to the natural organic body corresponds to the potentiality involved in the possession of a capacity to speak a certain language, whereas the potentiality ascribed to the non-organic body corresponds to the potentiality involved in a capacity to acquire the ability to speak a certain language. (Cf. *De Anima* II 412b25–26: 'We must not understand by that which is potentially capable of living what has lost the soul it had, but only what still retains it.' Right after this statement, seeds (σπέρμα) and fruits (καρπός) are given as examples of things which are potentially alive in the other sense, viz. as non-ensouled/non-organic bodies, which are potentially organic bodies because they can develop into an organic body. Aristotle would probably also hold that transplantable hearts and livers are potentially organic body parts in the same way as seeds and fruits are potential organic bodies.)

analysis would have failed: one would have fallen back on FD, and contrary to what one hoped to demonstrate, the paralysed leg will not be a leg, except homonymously. An alternative way to proceed in the quest for a compositional analysis of kinds of body parts could be to take a more reductive approach: to be a leg is to be composed of such and such chemical elements etc., and to hope that chemical elements can be proven not to be functional kinds.

We have seen that FD seems fitting as an account of kind individuation for artefacts. In the case of natural kinds it is more contested. If one includes compositional kinds not exhausted by their functions (and which thus resist ultimate analysis into functional kinds) in one's ontology, FD is not universally valid in the domain of natural kinds.⁴¹ But for Aristotle, FD states the conditions for kind individuation for *any* kind, artificial as well as natural. We have seen that what determines kind membership for Aristotle is fulfilment of the function associated with the specific kinds. Anything that does not fulfil the relevant function will not belong to the kind in question. In some special circumstances it is nevertheless acceptable to call objects by some kind-name even though they are not really members of the kind in question. This mostly happens because the things exhibit some visible similarities with the genuine exemplars of the relevant kind. The similarity, for its part, is typically due either to the fact that the non-genuine objects—the objects failing to fulfil some relevant function—actually *were* genuine functioning objects in the very recent past, or that they were made by some artist to resemble an object of the functional kind.

The account of being belonging to these objects has nothing definitional in common with the objects that belong to the kind with whom they share their name—their *per se* definition or account of being would actually most likely resemble that of a pile of dust—so they are homonymous in a *discrete* way. But since they are called by the kind-name because of some likeness of their outer appearance with that of genuine

⁴¹ I have used 'natural kinds' very broadly to cover anything that is not an artefact (i.e. man-made). 'Natural kinds' thus denote the same as 'natural things' (τὰ φυσικά or φύσει ὄντα) in Aristotle. Consequently elementary particles, chemical elements and botanical as well as animal species are all considered natural kinds. FD is probably more easily accepted for botanical and animal species than for chemical elements and especially elementary particles. I am tempted to assume a completely universal application of FD on Aristotle's behalf, but can unfortunately not leap into a discussion of this intriguing matter here. The relativity of proximate matter to form would then have to be discussed, as well as extremely difficult questions regarding prime matter and the relationship between prime and proximate matter. Prime matter—if such there might be—constitutes no kind (at least if one demands that kinds must be specifiable, viz. that it must be possible to state what they are), and FD has of course therefore no application to it. What in any case remains certain is that Aristotle *at least* believes that FD in the domain of natural kinds holds for botanical and animal species.

functioning objects, it is not accidental that they are called by the same name. Consequently, they are *non-accidental* discrete homonyms.

So much, maybe too much, for the non-accidental discrete homonyms. The meticulous presentation of this special kind of homonymy has in any case provided us with the opportunity to present some doctrinal fundamentals of Aristotelian philosophy—such as his functional criteria for kind individuation—that will prove useful at later stages of this investigation. Hopefully, a deeper general understanding of Aristotle’s concept of homonymy has also been acquired as a result of our dwelling on this special kind of homonymy. Of things with general importance for our investigation of homonymy, we have for example seen that function and essence always coincide for Aristotle, in such a way that no synonymous things can have different functions, and for anything with different functions, they will have different essences. All homonymous things have thus different essences and different functions.

2.5 The various kinds of homonymy: an overview

By inspecting a wide selection of texts from his corpus we have seen that Aristotle holds what we have coined *the broad conception of homonymy* throughout the whole span of his philosophical work. Aristotle identifies different types of homonyms, but they are always contrasted with synonyms in a manner that indicates that he regards the distinction into homonyms and synonyms to be exhaustive. What has been referred to as the narrow conception of homonymy would only accept some of the homonyms acknowledged by the broad conception, and relegate the others to a third class of things which are neither homonyms nor synonyms. Synonymous things are things which share both names and accounts of being. In contrast, homonymous things—according to the broad conception of homonymy—share names, but have different accounts of being corresponding to the names. In some places in his writings, notably in his late philosophy, Aristotle seems to admit instances of multivocals—‘things said in many ways’—which are neither synonyms or homonyms, and which thus appear to oppose both the broad conception and his earlier habit of treating multivocals and homonyms as co-extensive. We saw, however, from some passages in the *Nicomachean Ethics* and *Physics*, that this contrast is best understood as a contrast between accidental and

associated homonyms and that it consequently poses no threat to the broad conception, and likewise constitutes no real break with his earlier practice of treating homonyms and multivocals as co-extensive. The different types of homonyms recognized by Aristotle can be divided into (i) those that do not have anything definitional in common, the *discrete homonyms*, and (ii) those whose definitions are in some way related, the *associated homonyms*. Most of the discrete homonyms are *accidental* homonyms, and what this means is that it is merely by some coincidence of language that the things in question share name. The homonymy of things which are accidentally homonymous is mostly easy to detect, and this kind of homonymy therefore poses no threat in argumentation. Because of their obviousness and blatant unconnectedness they are conducive to comical exploitation in jokes.⁴² ‘Bank’, ‘key’, ‘crane’ and ‘club’ are examples of this kind of homonyms. They are without exception philosophically uninteresting. Some of the discrete homonyms, however, do not share their name accidentally, are not obvious in everyday contexts, and consequently merit more philosophical attention. These are things which, in Aristotele’s words, are mere homonyms because they fail to satisfy certain criteria for being genuine exemplars of a kind, more specifically: they fail to fulfil the functions associated with being a specific kind of object, and are thus not a *real* instance of that kind of object. One is nevertheless permitted (in some contexts) to call these non-genuine objects by the name of the kind they don’t strictly belong to because of some similarity of appearance or because they previously satisfied the conditions for membership in that kind. Some examples given by Aristotle of this kind of homonymous things are detached body parts and dead bodies. —A detached finger is only homonymously a finger; and a dead body is only homonymously a body. Because they are deprived of the functions of the relevant kinds of objects, they are not genuinely and in a strict sense a finger and a body anymore.

Unlike the discrete homonyms, *all* associated homonyms are of philosophical interest (*qua* homonyms). The associated homonyms are homonyms whose definitions are overlapping, though not completely (which would have made them synonyms). All the associated homonyms are difficult to detect, they are typically disputed, and their status as homonyms will thus almost in every case need to be argued for.⁴³ The association of homonyms are almost exclusively accounted for in terms of core-dependency by

42 See footnote 31.

43 Aristotle possibly regards the homonymy of ‘healthy’ and ‘medical’ as clear and obvious since he often resorts to them in illustrating more disputable candidates for homonymy. But the healthy and the medical are nevertheless not as clearly homonymous as the accidental discrete homonyms.

Aristotle. What Aristotle means when he says that some homonyms are core-dependent is that the relevant homonyms associate around a core. Take for example all the healthy things. They are, according to Aristotle, homonymously healthy because they have different accounts of being corresponding to their name. To put it differently, there are different ways of being healthy for the different healthy things. But the different healthy things, or the different ways of being healthy, are nonetheless associated, for there is one primary or focal⁴⁴ thing that is healthy to which all the other healthy things must stand in the right sort of relation in order for themselves to be healthy. The accounts of being for all the non-core instances of healthiness must make reference to the account of being for the core instance. And the core instance of being healthy is a state of well-functioning for an organism. Consequently the account of what it is for an apple, a mountain hike or a skin colour to be healthy must make reference to the health of an organism. Since the accounts of being for the non-core instances of healthiness make reference to the account of being for health in the organism (or what amounts to the same: the definition of a healthy organism is contained in the definitions of all other healthy things), the core instance has definitional priority over the non-core instances. Even though Aristotle almost everywhere explains associated homonymy in terms of core-dependence, there seems to be logical space for associated homonyms whose association is not explained in this way.⁴⁵ Since Aristotle leaves the possibility of associated homonymy that is not core-dependent unexplored, associated homonymy will in the following—if not otherwise noted—be taken to involve core-dependency.

We can sum up our findings regarding the different types of homonymy that are acknowledged by Aristotle thus:

1. *Accidental discrete homonyms.* These are chance homonyms. They have nothing definitional in common, and they share name just by some coincidence of language. Because they have completely distinct definitions, they are characterized as ‘far apart’, and are easy to detect. This is the kind of

44 A very important early investigation into core-dependent homonymy was carried out by G.E.L. Owen (1960). In this paper he introduced the influential concept *focal meaning* to describe the dependency of non-core homonymous instances on a core instance. The definitions of all the non-core instances made reference to the definition of the core instance, i. e. the focal meaning. Owen regards homonymy as a phenomenon pertaining to words and word meaning, and being dissatisfied with this restriction of homonymy, T.H. Irwin (1981) coined the concept *focal connection*—which was meant to characterise the associated homonymy of *things*—as a revision of Owen’s original conceptual invention.

45 The homonymy of ‘justice’ may be an example of associated but not core-dependent homonymy (Cf. *Nicomachean Ethics*, 1129a26–b1). Aristotle does at least not *try* to give an analysis of the association of the different types of justice by involving core-dependency.

homonyms often exploited in jokes. *Examples*: sharp, key, crane, bank, club.

2. *Non-accidental discrete homonyms*. These homonyms have nothing definitional in common, but it is nevertheless not due to a mere linguistic accident that they share name. Non-functioning specimens of a kind belong in this group. Because they fail to perform the functions associated with their kind, they are not genuine instances of the kind in question—they do not exhibit its essence—and are just homonymously called a finger, an axe etc. They only *appear* to belong to the relevant kinds. It is their outward look which occasions their homonymous character. Many of these homonyms are anything but obvious, and are thus often neglected. (Appreciating them might even depend on philosophical reflections on what it is that constitutes toolhood or the being of organisms.) *Examples*: detached body parts, dead bodies, dysfunctional tools, statues, pictures.
3. *Associated homonyms*. These are homonyms whose definitions are somewhat related. The relation or association between the homonyms consists of the definitions of some instances making reference to, or containing the definition of, some other thing. Even though the relation or association between homonyms could be thought to manifest itself in various ways, Aristotle is exclusively interested in relation to, or association around, a *core* instance. So, for all practical purposes, associated homonymy equals core-dependent homonymy in Aristotle. Some associated homonyms, such as ‘healthy’ and ‘medical’ are easily appreciated, but most are very hard to detect and even heavily contested. Many of them are central philosophical concepts. *Examples*: healthy, medical, being, goodness, one, nature, cause, priority, justice, friendship.

2.6 The use of homonymy in Aristotle’s philosophy

As we have pointed out earlier, Aristotle appeals to homonymy in both destructive and constructive contexts: both when criticising colleagues and in developing his own positive views. Detection of homonymy is proven to be a powerful dialectical tool by Aristotle in that demonstration of homonymy in the arguments of his colleagues—for

example that what figures under the same name in the major and minor premiss are really different things—gives reasons for rejecting their conclusions. Appeals to homonymy are thus frequently encountered in situations where Aristotle deals with the views of other philosophers. Refuting wrongheaded views and positions is of course an important and inevitable part of philosophical activity, but Aristotle’s use of homonymy is not confined to this purpose. In many contexts a demonstration of homonymy seems on the contrary to serve as a starting point for Aristotle’s own positive theorizing. For, in some cases there nevertheless exists some sort of order in the manifold of homonymous instances, and with order comes the prospect of systematic knowledge and scientific endeavours. The cases in question are where the homonyms are associated. As we have seen, Aristotle holds that association among homonyms involves a relation of dependence between non-core instances and a core instance: All non-core instances stand in some asymmetric relation of dependence to the core instance. And this is a kind of ordering that provides sufficient unity for the establishing of a science. As Aristotle says in *Metaphysics* Gamma 2 :

For not only in the case of things which have one common notion (τῶν καθ’ ἓν λεγομένων) does the investigation belong to one science, but also in the case of things which are related to one common nature (τῶν πρὸς μίαν λεγομένων φύσιν); for even these in a sense (τρόπον) have one common notion. (1003b12–15)

So even though the Platonic condition for a science should not be met, viz. that all the objects are united under one common notion, Aristotle maintains that there can still be scientific investigation in a particular domain provided that the things in the domain are related to one nature, or as he expresses it a little earlier in the chapter: related to one source (μίαν ἀρχήν, 1003b6). Core-dependent homonymy thus proves vital for the possibility of, among others, the sciences of being *qua* being (τὸ ὄν ἢ ὄν) and the good, as Aristotle famously rules out Academy-style sciences of these subjects due to the homonymous character of both being and the good. In the Platonist Academy one would namely set as a condition for the possibility of a science that the objects in the domain of the science be subsumed under one genus, something which involves one common predicate being synonymously predicated of all of them. This is the conception of science that is presupposed for example by Socrates when he informs Meno that he is seeking the *one* virtue, and that he consequently has little interest in the swarm of

different virtues brought to the discussion by Meno. For, '[e]ven if they are many and various, all of them have one and the same form which makes them virtues' (72a4–c5).⁴⁶ It is this one form of virtue that it belongs to the scientist of virtue to investigate, since the different kinds enumerated by Meno are all virtues owing to the fact that they share in the one and same paradigmatic idea of virtue; the one idea of virtue common to them all.

Regarding many object domains, Aristotle is in agreement with Plato that the unity providing the possibility of scientific investigation into them is the unity given by the belonging to a common genus. In some important cases however,—and here we find an example of Aristotle's employment of homonymy in a destructive context—this kind of unity is not forthcoming. But instead of precluding ambitions of scientific investigations in these cases—as a philosopher with a strict Platonist upbringing probably would expect—, Aristotle invokes instead his alternative form of investigation made possible by his important discovery of core-dependent homonymy. Assuming, however, that no philosopher with deep-rooted Platonist dispositions would be moved even the slightest by loose indications on Aristotle's part regarding the homonymous nature of some of his central scientific terms, and consequently the impossibility of his science, Aristotle will need to supply arguments both to the effect that the terms in question really are homonymous, and secondly, in order to establish the possibility of his own alternative scientific treatment of the things in question, to demonstrate an ordered association amongst the things antecedently shown to be homonymous, that is, to prove what it is that accounts for the dependency of the non-core instances on the core instance of things non-accidentally sharing names. But not even the first of these tasks is as straightforward and easy as one at this moment perhaps is inclined to think. For when we take a look at the techniques Aristotle has at his disposal for detecting homonyms—the tests introduced in chapter 15 in the first book of the *Topics*⁴⁷—we find that most of them only track the most obvious cases of homonymy, and that *all* of the interesting and disputed associated homonyms are revealed only inconclusively or not at all in most of these tests. The purported homonymy of goodness, for example, will neither be detected by the test for opposites ('good' has 'bad' as an opposite both when applied to morally evaluable actions and peanuts), nor the test for intermediates (the 'good–bad' opposition lack intermediates in both scenarios depicted above), nor uncontroversially the test for comparability. The only tests that actually prove tough enough to decide the hard cases,

⁴⁶ The translations of Plato are all, unless otherwise noted, from *Plato: Complete Works* (Cooper, 1997).

⁴⁷ See 2.1.3 above.

are the tests that track difference in signification. I say ‘tests’ here, for even though Aristotle has only one test for difference in signification (107a3–4: ‘Look also at the classes of the predicates signified by the term, and see if they are the same in all cases’⁴⁸), the tests for both difference in form⁴⁹ (106a23–25, translating εἶδος with ‘form’ instead of ‘kind’) and difference in definition (107a36–b6) are closely related to signification, since (i) forms/essences are the items that in every case is signified, and (ii) definitions signify. The crucial element in these tests is of course that signification for Aristotle is signification of essence—as we touched upon in our excursus on the domain of homonymy⁵⁰—and that a demonstration of difference in signification between some words therefore amounts to a demonstration of difference in essence in the things denoted by the words. When it comes to demonstrating difference in signification it is absolutely crucial to acknowledge that a mere colloquial discussion is not sufficient for accomplishing this. For the *surface meaning* of the words might conceal the fact that they really denote different things with different essences. Conversely, the surface meaning of a term can also make it appear ambiguous, even though it—on closer scrutiny—is not. Even though the essences figure in the *surface meanings* too, they do so through features or modes of presentation accidentally accompanying the essences, and are therefore not fully revealed as they are ‘in nature’ and ‘without qualification’, but only as they happen to be revealed in some specific circumstance ‘for us’.⁵¹ On the level of surface meaning words can seem to signify the same even though they do not, and this makes it necessary to investigate further into the *deep meanings* of the words in order to conclusively establish differences in signification. Only on the level of deep meaning are the essences grasped as they are in nature and without qualification. But the deep meanings of terms can elude even competent users of a language, so no loose reflection on the use of language is sufficient

48 A couple of things should be said about this translation: (i) ‘Classes of predicates’ translates τὰ γένη τῶν κατηγοριῶν (classes of categories), and (ii) Aristotle does not actually use σημαίνειν (‘signify’) here. A more literal translation of the whole phrase (τὰ γένη τῶν κατὰ τοῦνομα κατηγοριῶν) would be something like: ‘the types of categories corresponding to the name’ (translating κατὰ τοῦνομα here as in 1a1–2 with ‘corresponding to the name’). But in this context the corresponding-relation is clearly a signification-relation (Aristotle is asking us to see if the substance, quality, quantity etc. corresponding to/signified by the name in the different cases is the same or not), so the Oxford translation is warranted in transliterating the phrase using ‘signify’.

49 See 2.1.3 above.

50 See the very brief presentation of Aristotle’s view of signification in 2.1.2 above.

51 See *Physics*, 184a16–21 for a clear statement of Aristotle’s view on the levels of knowledge corresponding to the levels of meaning described above. (The highest level of knowledge is reached when one knows things through what is ‘more knowable in nature’ and ‘without qualification’, and not through what is ‘more knowable for us’.)

for demonstrating difference in signification. Only methods elsewhere employed in nailing the essences of things—be they philosophical analysis, empirical investigation, Socratic elenchus or what have you—will do. So, as we see, determining the signification of terms is not a purely linguistic endeavour for Aristotle. According to him, finding things out about the world is simultaneously finding things out about the words we use in talking about the world.⁵²

Having demonstrated a method for establishing homonymy even in the hard cases, Aristotle has advanced one crucial step in the direction of showing how he can make constructive use of a notion of homonymy in his own positive philosophy. What remains for him to do however, is to specify and substantiate the relation of asymmetric dependence holding between the non-core and core instance of associated homonyms. His sparse hints in this direction—about definitional containment and relation to one source—leaves much to be desired. For why is it the case that the definitions of non-core things necessarily have to make reference to the core thing, whereas the latter does not have to make reference to any of the non-core things? There must surely be something, presumably about the source (i.e. the core instance), that explains and grounds this definitional asymmetry. Since Aristotle at best provides the skeleton of such an explanation, he will—in order to establish a fully satisfactory understanding of core-dependent homonymy that is equipped to perform the tasks that he desires from it—need help to flesh it out. In the next part I will present Christopher Shields' causal analysis of core-dependent homonymy, an account that purports to contribute precisely such a fleshing out of Aristotle's rough outline.

52 See *Metaphysics*, 1004b1–4, where Aristotle states that it is the job of the philosopher, i.e. a scientist (and not just any competent user of a language) to determine in how many ways something is spoken.

3 Core-dependent homonymy

Before presenting Shields' causal analysis I will try to explain why Aristotle's brief characterisation of associated or core-dependent homonymy amounts to an underspecification of the phenomenon, as was indicated in the last section. Saying next to nothing about what underlies the asymmetric definitional dependence between the core and non-core instances of homonyms, and nothing about the kind of priority enjoyed by the core instance or source in relation to the others, Aristotle's account suffers from a hollowness that makes it difficult to see in what way his concept of core-dependent homonymy could reasonably be taken to possess the kind of explanatory power and scientific usefulness he ascribes to it. So, let us now begin the preliminary exposition of the shortcomings in Aristotle's account. As we have seen numerous times already, Aristotle frequently appeals to the homonymy of 'health' or 'healthy' in contexts where he aims at illustrating his general conception of associated or core-dependent homonymy. Presumably, then, he must think of this as an especially clear and unproblematic case of core-dependent homonymy. The second chapter of *Metaphysics* Gamma, in which Aristotle tries to establish the core-dependency of 'being', is perhaps the most famous of these contexts. Because of the status assigned to the homonymy of health as the example *par excellence* of core-dependent homonymy, it is natural to start an investigation into the nature of this type of homonymy by inspecting how Aristotle thinks his general view on these types of homonymy is clarified by the examples involving 'health'. Even though we have already numerous times cited and referred to parts of this chapter—thus having made the content and claims in it fairly well known by now—I will at this stage nevertheless cite at length the section most relevant for us:

Just as everything which is healthy is related to health (πρὸς ὑγίειαν), some by preserving health, some by producing health, others by being indicative of health, and others by being receptive of health; and as the medical is relative to the medical craft (πρὸς ἰατρικὴν), for some things are called medical because they possess the medical craft, others because they are well-constituted relative to it, and others by being the function of the medical craft—and we shall also discover other things said in ways similar to these—so too is being said in many ways, but always relative to some one source (πρὸς μίαν ἀρχήν). (*Metaphysics*, 1003a34–b6, Shields' translation.)

The claim in this passage is that even though ‘healthy’ is said in many ways, i.e. is homonymous, the different sayings or instances of ‘healthy’ are nevertheless, in some theoretically interesting way, associated. For unlike cases of discrete homonymy (accidental and non-accidental), all the different instances of ‘healthy’ are related to, or associate around, one core notion of health. So, for any thing of which it is said that it is healthy, Aristotle tells us, we will find that an account of what the healthiness in the particular case consists of will make reference to the core notion. Let us assume that the core notion of health is that of a state of well-being and well-functioning of persons. If this is so, persons are what is healthy in a primary sense, and any explication of other instances of healthiness must refer back to the health residing in persons. A healthy tan can thus be explicated as a skin hue that is indicative of the health of a person, a healthy meal as something which is productive (or perhaps rather preservative) of health in a person, and a healthy lifestyle as a lifestyle that contributes in some way or other to the health of a person. In this clarification of his view, we see that Aristotle uses the notion of ‘relation to one source’ in specifying the way in which core-dependent homonyms associate. All the instances of ‘healthy’, in ‘healthy tan’, ‘healthy meal’ and ‘healthy lifestyle’, are understood in terms of (or with reference to) the core notion of health. It is this ordering—the relation to a core instance—that is taken to account for the partial definitional overlap existing between cases of associated or core-dependent homonyms.⁵³ For the sake of clarity we can summarise Aristotle’s conception of core-dependent homonymy as it is expressed in the above cited passage thus:

CDH: x and y are homonymously in a core-dependent way F iff: (i) they have their name in common, (ii) their definitions do not completely overlap, and (iii) there is a single source to which they are related.⁵⁴

Even though the third condition—about the relation to a single source—to some extent helps to clarify the nature of the type of association holding between core-dependent homonyms, the great diversity of permitted relations—as revealed in the example—

⁵³ It is because Aristotle everywhere (like here) characterises association of homonyms by the notion of ‘relation to one source’ that we are justified in using ‘associated homonyms’ and ‘core-dependent homonyms’ interchangeably.

⁵⁴ Adopted from Shields (1999, 106).

nevertheless leaves it fundamentally obscure. Aristotle's sparse illustration leaves us wondering both about what kinds of relations are sufficiently strong for establishing association, and what it is that makes one instance core in relation to others. In an illustrative example construed in order to exhibit the deficiencies of Aristotle's formal specification of core-dependent homonymy, Christopher Shields shows how even the obviously homonymous 'bank' can pass as core-dependent:

If savings banks were always as a matter of fact located within five hundred miles of river banks, someone might mistake this as essential of them and offer an account according to which savings banks were those institutions located within five hundred miles of river banks where money is kept and traded. (Shields, 1999, 108)

Since the accounts of savings banks in this scenario makes reference to river banks, the cases of 'bank' will here qualify as core-dependent, something that is obviously deeply unsatisfactory. The problem with Aristotle's specification of core-dependent homonyms is that it contains no restrictions or 'controls on the sort of appeals definitions are permitted to make to other definitions' (Shields, 1999, 108). What we lack from Aristotle is an abstract characterisation of the nature of the relations homonymous terms must bear to the core notion (Shields, 1999, 107).

Although the nature of the relation between core-dependent homonyms is underspecified by Aristotle, his example nevertheless shows us that the relation is presumed to be asymmetrical. It is thus not only the case that every instance of some core-dependent homonym must stand in a relation to one source; this relation must additionally be asymmetrical in such a way that the account of the non-core cases must make reference to the core case, whereas the account of the core case need not make reference to the non-core cases. The accounts of 'healthy' in 'healthy tan' and 'healthy meal' will thus have to make reference to the account of 'healthy' in 'healthy person'. The account of 'healthy' in 'healthy person', on the other hand, will not make reference to any of the accounts of the non-core instances of 'healthy'. But, why is it that an account of what it is for a person to be healthy is prohibited from making reference to traits that typically distinguish healthy persons, such as their distinctive tan, posture or vigour? Aristotle will need a notion of priority to ground this asymmetry, and this is

something that is not provided by CDH alone. What we are now in a position to see is that a fully fleshed out notion of core-dependent homonymy hinges on a satisfactory specification of the relation obtaining between associated homonyms. Clause (iii) in CDH is thus in need of revision. Since Aristotle presumes that the relation holding between the core and non-core instances is asymmetric, the specification must at least capture this much. When initiating the analysis that we will turn to in a moment, Christopher Shields accordingly states that what is wanted in a complete account of core-dependent homonymy is a specification of some asymmetrical relation R , that all non-core instances of a homonym necessarily bear to the core:

Necessarily, if (i) a is F and b is F , (ii) F -ness is associatively homonymous in these applications, and (iii) a is a core instance of F -ness, then b 's being F stands in R to a 's being F . (Shields, 1999, 110)

The constraints laid on R is that it be asymmetrical, that it be open-ended so as to admit of new cases of non-core homonyms, and that the accounts of all the non-core cases make reference to the account of the core case (1999, 110). We will now turn to Shields' analysis and his suggested specification of R .

3.1 Core-dependent homonymy: Shields' causal analysis

How one account ($\lambda\acute{o}\gamma\omicron\varsigma$) can depend on another is one of the things one expects R to address. More specifically, one expects R to explain the explanatory priority of the account of the core case of a homonym in relation to all the non-core cases. In his analysis of core-dependent homonymy Christopher Shields is heavily influenced by Cardinal Cajetan's specification of R in terms of the Aristotelian four-causal scheme, and he speculates that it was perhaps because Cajetan recognized the crucial importance of explanatory priority that he offered such a specification. Conditions of explanatory adequacy are namely of central concern in this scheme.⁵⁵ Due to the importance of

⁵⁵ See *Physics* 198a14-b9 for an introduction of Aristotle's four-causal explanatory scheme. To know a thing is according to Aristotle to know *why* ($\delta\iota\alpha\ \tau\acute{\iota}$) it is so, and the stating of the four causes in relation to an object (viz. to state *its* causes) is supposed to adequately answer complementary why-questions with respect to it.

Cajetan's causal specification of *R* in Shields' analysis—it should in fact merely be regarded as a refinement of Cajetan's suggestion—I will cite at length the passage where Cajetan's interpretative proposal is presented:

Analogy of this type [analogy of attribution, or *πρὸς ἓν* homonymy⁵⁶] can come about in four ways, according to the four genera of causes (calling for the moment the exemplary cause the formal cause). It may occur with respect to some one denomination and attribution that many things stand in different ways to one end, to one efficient cause, to one exemplar and to one subject, as is clear from the examples of Aristotle's *Metaphysics* iv. For the example of health in *Metaphysics* iv refers to the final cause, while the example of medical in the same place refers to the efficient cause, the analogy of being, also in the same place, to the material cause, while the analogy of good, introduced in *Ethics* i. 7, refers to the exemplary cause. (*De Nominum Analogia* 2.9, cited from Shields, 1999, 110)

Although he considers Cajetan's examples to be misleading, Shields deems Cajetan's basic idea to be 'exactly right' (1999, 111). The problem with Cajetan's examples, according to Shields, is that they make it seem that each homonym ('medical', 'healthy', 'good' etc.) is limited to just one of the four causal relations. That is, Cajetan appears to believe that the derived (i.e. non-core) instances of 'medical', for example, are limited to refer to the efficient case, whereas the derived instances of 'healthy' are limited to refer to the final cause. The relations that Aristotle mentions in illustrating core-dependencies, however, do not seem to support such limitations. The scalpel (*μαχαίριον*), for its part, is not called medical because it is related by an efficient cause to medicine, but rather because its function (i.e. final cause) is provided by its role in medical practice (*Metaphysics*, 1003b1–3, 1061a3–5). A doctor, on the other hand, will qualify as medical because he (or maybe better: his soul) possesses the craft of medicine (*Metaphysics*, 1003b1–2). It is thus wrong to assume—as Cajetan seems to do—that all the particular cases of some specific core-dependent homonym are related only by one kind of cause to the core notion. One should rather suppose that different non-core instances of the same core-dependent homonym can stand in different kinds of causal

56 Cajetan is here treating core-dependent homonymy (or *πρὸς ἓν* homonymy) as a case of analogy, or more precisely, analogy of attribution. As we have pointed out earlier, this was the usual practice in medieval philosophy. For more on this, see footnote 30. Every instance of 'analogy' in the above cited passage should thus be read as synonymous with core-dependent homonymy.

relations to the same core.

Taking out what he judges to be right from Cajetan's interpretative suggestion, while leaving out what he deems peculiar and wrong, Shields formulates a completely general specification of *R* which he calls *four-causal core primacy*:

FCCP: Necessarily, if (i) *a* is *F* and *b* is *F*, (ii) *F*-ness is associatively homonymous in these applications, and (iii) *a* is a core instance of *F*-ness, then *b*'s being *F* stands in one of the four causal relations to *a*'s being *F*. (Shields, 1999, 111)

Christopher Shields defends this suggested specification of *R* in three stages. In the first stage, he shows how the specification grows naturally from some of the illustrations of core-dependent homonymy given by Aristotle himself. In the second stage, Shields tackles apparent difficulties related to reconciling FCCP with some of the other of Aristotle's illustrations, proceeding to argue that what initially appeared to be problematic cases for FCCP, in the end strengthen it. In the third and final stage, it is shown that FCCP meets the constraints for specifications of *R*⁵⁷, that is, that it is both sufficiently definite and suitably open-ended. In what follows I will go through these stages successively.

Let us turn to Aristotle's two favourite examples of core-dependent homonymy, 'healthy' and 'medical', and see how or whether they can reasonably be said to fit the specification of *R* in terms of FCCP. In *Metaphysics* Gamma 2 Aristotle states that all healthy things are related to one thing, health, 'either by preserving it (τῷ φυλάττειν), producing it (τῷ ποιεῖν), indicating it (τῷ σημειῖον), or by being receptive of it (δεκτικὸν αὐτῆς)' (1003a35–b1). In a similar way, things are called medical 'either by possessing it (i.e. the craft) (τῷ ἔχειν), by being naturally suited to it (τῷ εὐφυεῖς εἶναι πρὸς αὐτὴν⁵⁸), or by being a function of it (τῷ ἔργον)' (1003b2–3, my translations). Shields points out that even though these various examples display different possible relations between core and non-core cases of 'healthy' and 'medical' respectively, all of them

⁵⁷ See at the very end of 2.2

⁵⁸ Shields writes with regard to this example that what Aristotle probably has in mind here is that some people may count as medical even though they lack professional training as doctors. They can, for example, simply have a knack for healing (e.g. through the use of natural remedies), or be in possession of the sort of intelligence—pared with certain other dispositions—that makes them naturally equipped for medical tasks (see footnote 10, 112).

immediately seem specifiable in (four-)causal terms. Some instances are particularly clear. Consider for example a scalpel.⁵⁹ A scalpel is medical because its function (ἔργον) is medical, viz. to cut in medical procedures. The core-dependent homonymy is obvious in this case ‘because the final cause [i.e. function] of a scalpel is easy to specify relative to the core notion of medicine’ (Shields, 1999, 112). The cases of healthy regimens and diets are similarly clear. A particular regimen is healthy because it produces (ποιεῖν) health. And, obviously, when something is productive of health, it will necessarily stand in an efficient causal relation to health. The cases of the medical scalpel and the healthy regimen, then, support FCCP by conforming to it. Not all of Aristotle’s illustrations, however, are as clearly specifiable in causal terms. Shields mentions the case of a complexion being healthy by being indicative (σημεῖον) of health, and that of vitamins being healthy because they preserve or guard (φυλάττειν) health, and marks that neither ‘being indicative of’ nor ‘preserving’ are obvious instances of any of the four causal relations (1999, 113). They thus seem to pose a challenge to FCCP. However, Shields quickly dismisses this possibility, for FCCP does not demand that the core of every homonym must be the causal source of the non-core instances⁶⁰: ‘That is, although it is in some sense an ἀρχή, the core notion need not be causally prior to the derived cases’ (1999, 113).⁶¹ That the derived cases of a homonym need only stand in one of the four causal relations to the core without any additional restriction regarding the ‘direction of the causality’ (113), should actually be clear already from the example of regimen. A regimen is called healthy on the grounds that it produces health, and is thus an example of an efficient cause. In efficient causality, the causal direction is from the producing instance to the produced (i.e. the result), which in this case is health. So in the case of producing health, the causal direction is *to* the core *from* a non-core case. Something

59 The scalpel is introduced as an example of something medical in *Metaphysics* Kappa 3, 1061a3–5. It is there said to be medical because it is useful (ταύτη χρήσιμον) to the medical science.

60 It is not at all clear to me why Shields thinks that it is because one expects the core to be the causal source of the non-core instances of a homonym that the relations ‘indicative of’ and ‘preserving’ do not at a first glance seem to conform to FCCP. The relation ‘indicative of’, for example, will quite to the contrary—as we shall see shortly—seem to meet precisely such an expectation. I have, however, chosen to stay close to the steps in Shields exposition at this point—instead of trying to clean it up—since this would naturally provide me with the opportunity to introduce his intriguing statement regarding causal priority and FCCP. (See below.)

61 This statement is actually very surprising, for if the core instance of a homonym is not causally prior to the non-core instances, then causal specifications of the relations between them will not establish the kind of asymmetrical dependence of the non-core instances on the core that we expected any specification of *R* to provide (included FCCP). Besides, the core being ‘in some sense a source (ἀρχή)’ in relation to the non-core instances is still what is going to explain its being prior to them, and how something in this situation can be prior by being the source in another way than being causally prior has a tint of mystery to it. I will return to these matters later.

that is healthy in a derived sense, namely a healthy regimen, is thus, according to Shields, causally prior to the core case in situations like this.

When we now consider the case of ‘preserving’ we find that it actually is very similar to that of ‘producing’. When we say, for example, that a diet is healthy, we say so because it preserves health by contributing, in a nutritive way, to the maintenance of the health of a person. A healthy lifestyle will similarly preserve health because it contributes to the health of a person by, say, regulating daily exercises, moderation in eating and drinking, total abstinence from smoking etc. We see then that the preservation of health brought about by a diet or a lifestyle should be reckoned as an instance of efficient causality just as the regimen was. The fact that neither a diet nor a lifestyle can be said to maintain health in a person solely by themselves, gives no reason for doubting this, for something can count as an efficient cause of x even though it is not alone responsible for the preservation of x . Being one among several factors which together are sufficient for the production/preservation of some result, will namely in many circumstances be enough to be regarded as an efficient cause by Aristotle.⁶² Since preserving counts as an efficient cause, this example provides further support for FCCP.

Also in the cases of something being ‘indicative of’ we are dealing with efficient causality. But in these cases the causal direction goes the opposite way, that is, *from* the core *to* the non-core instances. A healthy complexion, for example, will qualify as healthy because it is indicative of the health of a person. The healthy complexion is in this case brought about by the health of a person: The healthy look of the skin results from, viz. is efficiently caused by, the well-being (i.e. health) of the organism (i.e. the person). But also here we need to stress that one must not think of health as alone sufficient for the bringing about of a healthy complexion. There are other conditions co-responsible for a healthy complexion that must also be satisfied. Nor is it the case that a healthy complexion guarantees a healthy constitution (viz. health in a person), for, as Shields says, ‘some signs are misleading’ (1999, 114). But since Aristotle holds that efficient causal connections are compatible with some degree of non-regularity,⁶³ it is reasonable to understand the relation in question, i.e. ‘indicative of’, as an example of efficient causation too. So this example also contributes supporting evidence for FCCP.

The examples we have considered so far show that Aristotle’s various illustrations of

62 See for example *Physics*, 194b13: ‘Man is begotten [produced, γεννᾶ] by man and by the sun as well.’

63 Aristotle says that there are genuine causal relations ‘where things always comes to pass in the same way, ... or *for the most part*’ (*Physics*, 196b10–12, my italics).

kinds of relations between core-dependent homonyms at least can be specified in terms of efficient and final causation. But what about material causation? Examples of this are much less obvious. Perhaps we have examples of material causation in cases where things are called healthy because they are receptive (δεκτικὸν) of health? This, at least, is Shields' suggestion (1999, 114). As with the other relations, Aristotle does not give any concrete examples of things being receptive of health, so one is forced to search for possible candidates by oneself. Shields proposes material substrates and supports his suggestion by explaining that Aristotle typically characterizes material substrates as receptive of forms when thinking of them as a material causes. One place in the corpus where this comes out clearly is in the *Metaphysics* Delta:

That in which a thing is present as in something receptive is said to have the thing, e.g. the bronze has the form of the statue, and the body has the disease. (1023a11–13⁶⁴)

Muscles, arteries and blood—being material substrates of human organisms—can thus be regarded as healthy because they are material causes of the health of a person by being receptive of health. That blood can qualify as a material cause for health, however, also helps to illuminate another aspect of FCCP, namely that derived instances of a homonym are permitted to stand in more than one causal relation to the core instance. For blood can obviously also stand in an efficient causal relation to health, by being indicative of health—blood tests are after all used as a diagnostic tool in medicine—so that 'healthy' in 'healthy blood' can be seen to be 'doubly derived' (Shields, 1999, 114).

From the above considerations of Aristotle's illustrations we see that non-core instances of homonyms can at least stand in three of Aristotle's four causal relations to the core instance: final, efficient, and material. None of his examples, though, constitutes an obvious case of formal causation. Furthermore, some very reasonable questions can be raised about whether to stand in a relation of formal causation to the core instance of some homonym can ever exemplify a case of core-dependent homonymy. The reason for this is that when something is a formal cause of something

⁶⁴ Cf. *Metaphysics*, 1018a25–30 and 1056a25–27. Note the occurrences of 'receptive material' in these places.

else, the form of the first thing is responsible for the existence of that very same form⁶⁵ in the other thing, and when the *same* form inheres in both things, they will have identical accounts of being and thus be synonyms (and not homonyms). This reasoning makes the mere thought of specifications of relations among homonyms in terms of formal causation seem ridiculous. An attempt at a *four*-causal account of the connections between core-dependent homonyms will thus seem to exhibit a grave ignorance with respect to something very elementary in Aristotelian philosophy, namely that uniformity implies synonymy. One is then probably best advised to restrict FCCP by ruling out the possibility of formal causal relations among non-core and core homonyms. In fact, this would amount to a substitution of FCCP with a *three*-causal principle. But, according to Christopher Shields, such a rejection of FCCP based on a dismissal of the possibility of formal causal relations among homonyms is mistaken. The argument with the negative conclusion that FCCP should be rejected must namely have as a premise that ‘formal causation is sufficient for univocity [i.e. synonymy] and so incompatible with homonymy’ (1999, 116). But this premise, Shields claims, is false. For even though *F* is univocal in most of the cases where something’s being *F* is the formal cause of something else’s being *F*, ‘Aristotle also recognizes instances of formal causation where this does not hold’ (1999, 116). Shields’ picks an example from Aristotle’s theory of perception. In perception, according to Aristotle, the sensory faculty receives the form of the sensible object (τῶν αἰσθητῶν εἰδῶν), without its matter (ἄνευ τῆς ὕλης, *De Anima*, 424a17). What Aristotle means here is not that the sense organs takes on the qualities of the sensible objects, that the organ itself becomes red, hard or lobster-esque, ‘but that they becomes isomorphic with the objects of perception representatively’ (1999, 116). Shields characterises these two different modes of having the sensible form in terms of *encoding* and *exemplifying*. When sensible forms are exemplified in objects, the qualities themselves (redness, hardness, etc.) are manifest in the objects. When the sensible forms are encoded in the sense organs, on the other hand, the sensory faculties ‘are in a state corresponding to—and fully representative of—a given set of perceptual qualities’⁶⁶ (1999, 116). It is because Aristotle acknowledges encoding as a kind of formal realization that Shields thinks that it is wrong to assume

65 At least specifically, if not also numerically. One’s stand in the debate on particular forms will determine one’s view here. To turn confessional, I am a believer in particular forms, so in my view the forms inherent in the two things are only specifically, and not numerically, the same. I will, however, not argue for the existence of particular forms here, but see Frede/Patzig (1988) and Lloyd (1981) for convincing arguments in their favour.

66 See Shields (1995) for his account on perceptual isomorphism, and more on encoding and exemplifying.

that formal causation implies synonymy between the instance that causes and the caused instance. It is the redness of the lobster that causes the sense organ to be red, but being red for the lobster is different from being red for the sense organ. They both realize the form *red*, but they realize it differently, the one by exemplifying it and the other by encoding it, so they are red homonymously. However, as Shields admits, Aristotle does nowhere explicitly state that the sense and the sensible object are homonymously *F*, where *F* is some sensible form, and thus never openly grants that to realize a form in different ways is sufficient for homonymy. Besides, it is very difficult to find other uncontroversial examples of core and non-core homonyms related by formal causation. Shields launches the hard-to-understand case of something's being medical by being 'naturally suited to it' (τῷ εὐφυνεῖ εἶναι πρὸς αὐτὴν, *Metaphysics*, 1003b2–3) as a possible candidate. For, as he says, if what Aristotle means here is that someone lacking medical education and professional training nevertheless can be regarded as medical by possessing, say, a natural talent or inclination for healing, then he seems to think that the medical craft (viz. the form of a doctor) is manifest in this person, albeit in an incomplete way. If this is so, Shields continues, 'then a folk healer will count as medical because of standing in an appropriate formal causal relation to medicine' (1999, 118). This example opens for the possibility that two things can count as *F*s in different ways, not only by realizing *F*-ness differently (i.e. encoding it or exemplifying it, as in the case of perception), but also by exemplifying *F*-ness differently (1999, 118). Aristotle may then want to claim that a doctor and a folk healer—despite the fact that they both stand in a formal causal relation to medicine—exemplify the medical craft in such different ways that 'medical' is said homonymously of them. But again, we do not find Aristotle saying in any other place in the corpus that things which similarly exemplify a form differently, for that reason should be regarded as homonymous. Actually, quite the contrary. For, if we remember his view concerning the determination of kinds, namely that kinds are functionally determined⁶⁷, we see that membership in a kind—and thus the possessing of a form (or essence)—seems to be an on–off matter, and not something that comes in degrees: Either the thing fulfils the function associated with the kind, or it does not. In the first case it will qualify as a member of the kind, and will thereby possess the relevant form, in the second it will not, and will accordingly lack the relevant form. A person who actually manages to heal, and so fulfils the function of the medical craft, would seem to qualify as a doctor (and thus possess the form of a doctor), and I have difficulties in seeing how he can be a doctor differently (i.e. homonymously)

67 See 2.1.4.

just because he is, say, less than a perfect realizer of the craft of medicine. On the basis of the functional determination thesis (FD), it seems enough to be able to do what a doctor does in order to count as a doctor (fully and completely), with no further restrictions as to how many successful treatments one has performed (or whatever). *What* he is, namely a doctor, seems to be the same, even though he should be less successful or less good at being a doctor than his colleague. If it seems right to some to differentiate what something is on the basis of how good it is at performing its function, this would be so, I guess, to a stronger degree with regard to artefacts than to natural kinds. For, whereas it does somehow sound reasonable that something can be a knife to a fuller or lesser extent by being more or less suited to cut, the same cannot be said of, for example, trees or cows. Something cannot be more or less a tree or a cow: Either you are a tree, or you are not, and ditto with cows.⁶⁸ So I certainly do not find Shields' reasoning persuasive regarding natural kinds. But on closer scrutiny, I don't really find his reasoning persuasive with regard to artefacts either. It seems namely all too clear that Aristotle holds that what makes a thing be what it is, is the function it performs, so that there does not seem to be any other *way* of exemplifying a form than by fulfilling the function associated with it, and again, this is an on–off matter, and not something that comes in degrees. What the thing is able to do, determines what kind of thing it is, and the varying degrees of perfection with which it can perform its proper task does not really seem to influence *what* it is at all, and one is therefore not justified in saying that an imperfect and a perfect knife are knives homonymously. But maybe I have slightly misrepresented Shields' point regarding the different ways of exemplifying a form by casting it so clearly in terms of levels of realization. For in illustrating how a form of a teacher can be exemplified differently by a Buddhist monk and a chief mechanic in a garage, Shields says:

[Because] we regard them as engaging in radically different activities, or as being disparate sorts of entities altogether, we may be disinclined to treat them as exemplifying the same craft in the same way. (1999, 118)

So maybe exemplifying a form differently should not be understood in terms of levels

68 Cf. *Categories*, 3b34: 'Substance, it seems, does not admit of a more and a less. I do not mean that one substance is not more a substance than another (we have said that it is), but that any given substance is not called more, or less, than which it is.'

of realization, but rather by being engaged in different kinds of activities. But, in characterizing them as engaged in ‘radically different activities’ has he not lost sight of the supposed common craft that they are said to be practitioners of? For assuming that being a teacher is one thing (i.e. a unified phenomenon) and thus constitutes a kind, there must be a goal (τέλος) that specifies what a teacher is for. Let us say (in a somewhat old-fashioned way) that this is to produce knowledge in students. The function of the teacher will thus be to engage in knowledge-enhancing activities towards students. In this respect, the activities of the Buddhist monk and the chief mechanic seem exactly the same. It is only if there were completely distinct goals and functions belonging to the teaching activities of the monk and the mechanic that it would be right to speak of ‘radically different activities’. But if this were the case, then ‘being a teacher’ would constitute different kinds in the two cases, and the monk and the mechanic would, due to FD, exemplify different forms. So, unless there can be assembled other and more convincing considerations than those offered by Shields, it is difficult to see how forms can be exemplified differently. And secondly, to see how this could ground homonymy—a kind of homonymy among uniform things—, and thus constitute an example of homonymous things that are related by formal causation, is doubly difficult. The idea of things exemplifying some specific form differently thus seems of no help to Shields in his search for cases of homonyms related by formal causation. Besides, what Aristotle has in mind when he speaks of being ‘naturally suited to [the medical]’ (1003b2–3), is probably not possessors of the craft of medicine (as Shields suggests), but more likely bodies or instruments. The kind of causal relation he probably intends to characterize by this locution is thus either that of material or final causation.⁶⁹

Since things which are well-constituted relative to the medical most likely, in the light of the above discussion, fail to qualify as instances of homonyms standing in formal causal relations, Shields’ example from perception—that the perceiver and the perceived are homonymously red—is arguably the only defensible case of a formal causal relation between homonyms. The formal causation involved in perception, however, is of a very peculiar sort, and one which is unique to perception. This is due to the nature of the sensible matter of the sense organ. The sense organ is namely potentially like what the perceived object is actually (*De Anima*, 418a3–4), so that the change involved in perception—the sense organ taking on the form of the sensible

⁶⁹ For examples of material and final causal relations between homonyms, see the discussions of medical instruments and healthy bodies above.

object (424a19)—is not a case of qualitative change, but rather a change to its (i.e. the sense organ's) 'dispositions and nature' (τὰς ἑξεις καὶ τὴν φύσιν, 417b17). So the kind of formal causation described in such a situation is only possible thanks to the presence of sensible matter, viz. a 'capacity for sensible awareness' (Ward, 2008, 82), in the sense organ. This means that the only kind of formal causal relation that Shields has found to obtain between homonyms proves to be an extremely uninteresting one insofar as it only occurs in perception and thanks to sensible matter. It will thus never figure in the explanations of the relations among any of the philosophically significant associated or core-dependent homonyms enumerated by Aristotle (e.g. being, goodness, life, cause, justice, friendship), due to the lack of sensible matter in these cases.⁷⁰ The upshot of this is that only three of Aristotle's four causes from his four-causal explanatory scheme can really be said to be applicable in specifications of the relations that derived homonyms have to their core homonyms. It consequently seems that Shields should rather opt for a *three-causal* specification of *R* instead of his proposed *four-causal* specification (FCCP). This would constitute no real defeat for Shields however, for what is most important in his proposal is the demonstration that Aristotelian causal explanations can be used in specifying the relations that core and non-core instances of homonyms stand in with respect to each other. But since the inclusion of formal causation in FCCP is not downright wrong (for we have after all an instance of formal causation—though unrecognised by Aristotle—between the homonymous cases of redness in the sensible object and redness in the sense organ), and neither causes any harm, I will not demand a revision of his principle, but grant Shields his *four-causal* specification of *R*.

To sum up, we have now worked ourselves through the first two stages of Shields' defence of FCCP. That is, we have seen how a specification of *R* in terms of FCCP grows naturally from some of Aristotle's own examples of core-dependent homonyms (e.g. that being 'productive of health' is a case of efficient causality), and that what initially seemed to pose problems for FCCP in the end fitted and confirmed it (e.g. the variation of the causal direction relative to the core). We have nevertheless, contrary to Shields, found reason to doubt that homonyms could be related by formal causation in

70 Cf. Ward's critique of Shields' use of perception as an example of a formal causal relation between homonymous things: 'But the issue at hand concerns whether sense perception provides the kind of model of formal causation, non-standard or otherwise, that could serve as an explanation of causation in cases of core-dependent homonymy; I do not think this is the case. One consideration involves the fact that the causation involved in sense perception is *sui generis* due to the nature of sensible matter: perception involves a kind of change in the sense organ that is unique because of its capacity for sensible awareness. In this regard, the activity of sense perception depends on certain features, like awareness and representation, which are not present in other kinds of causal processes in other kinds

any interesting way. But since there actually are some homonyms which are related by formal causation—in the (for us) uninteresting⁷¹ situations of perception—we will grant Shields the right to say that any non-core instance of a homonym must stand in one of the *four* causal relations to the core instance, even though none of the relations between instances of any of the most significant homonyms in Aristotle’s philosophy will be specified in terms of formal causation.

Having demonstrated that the relations obtaining between core and non-core homonyms should be specified in causal terms, the definition of core-dependent homonymy given earlier can now be improved by exchanging CDH (iii) with the relevant part of FCCP:

CDH*: *a* and *b* are homonymously *F* in a core-dependent way iff: (i) they have their name in common, (ii) their definitions do not completely overlap, and (iii) necessarily, if *a* is a core instance of *F*-ness, then *b*’s being *F* stands in one of the four causal relations to *a*’s being *F*. (Shields, 1999, 119)

This account, Shields says, is ‘intended to capture the spirit of Cajetan’s proposal by restricting the relation *R* to the four-causal scheme’ (1999, 119).

The last thing that remains for Shields to do in his defence of FCCP (and thereby also CDH*) is to show that it is, as I said earlier, ‘sufficiently definite and suitably open-ended’.⁷² This is best done, according to Shields, by showing that it rules out ‘unwanted junk relations’ (1999, 119). We will now, by giving one paradigmatic example, show how it does so. In my introduction to the part on core-dependent homonymy I cited a scenario designed by Shields to expose the deficiencies of Aristotle’s all too rough characterisation of core-dependent homonymy (CDH), in which savings banks and river banks came out as core-dependent homonyms. The non-contingent relation responsible for the fact that they qualified as core-dependent in this scenario, was that savings banks were always positioned within five hundred miles of river banks. This is a typical example of the kind of junk relation that we want CDH* to rule out. So does it? Because (i) ‘being positioned within five hundred miles of’ a river bank is not an example of any of Aristotle’s four causes, and (ii) *R* as specified by FCCP requires

⁷¹ Due to the peculiarity of sensible matter.

⁷² See under 3.1.

precisely that it should be (viz. in order to satisfy CDH* (iii)), it follows that (iii) river banks and savings banks do not qualify as core-dependent homonyms (Shields, 1999, 119). That CDH* accordingly rules out junk relations shows that it is sufficiently definite. The fact that it will properly encompass all instances of homonyms that happen to stand in one of the four causal relations to a core instance, shows, on the other hand, that it is suitably open-ended. It will namely permit ‘determination [of core-dependent homonyms] on a case-by-case basis’ and will ‘not preclude the development or extension of a homonymous concept through time’ (Shields, 1999, 119).

Being sufficiently definite and open-ended, FCCP satisfies much of what was demanded from a specification of the relation R obtaining between derived and core instances of a homonym. But since FCCP holds just because the direction of the causal relation can go both to and from the core homonym—a healthy lifestyle is an efficient cause of a person’s health, and a person’s health is at the same time an efficient cause of his healthy complexion—, it does not capture the way in which the non-core instances are supposed to be asymmetrically dependent on the core homonym. What makes the core cases be core, is that the definitions of all non-core cases must make reference to the core cases, whereas the reverse does not hold (viz. that the definitions of core cases must make reference to any non-core case). Causal relations can not ground this definitional priority of the core case in relation to the derived cases since, as we have seen, it is both causally prior and posterior relative to different non-core cases. Since CDH* leaves the definitional asymmetry obtaining between derived and core homonyms unexplained, it is inadequate in its present form.

3.2 Definitional priority

CDH* is, as we have seen, successful in many ways. But since it fails to explicate in what way the non-core homonyms are asymmetrically dependent on the core homonyms, it needs to be supplemented by an additional clause that will make this clear. Shields suggests that the derived instances of homonyms are asymmetrically dependent on the core instances because these have some kind of ‘primitive priority’ (1999, 126) over the derived instances. In what follows, we will explore this suggestion.

As we have seen in the presentation of core-dependent homonymy in *Metaphysics*

Gamma 2, Aristotle calls the core homonyms ἀρχαί (1003b6), what I have translated as ‘sources’ throughout. Why Aristotle reckons the core homonyms as sources of the non-core or derived homonyms, should be quite obvious. The derived instances of homonyms are core-dependent because their accounts necessarily make appeal to the core instance, whereas the account of the core instance does not make appeal to any of the derived instances. But what it is that grounds this asymmetry, is, however, less obvious. We have seen Shields arguing that it cannot be the causal relations holding between the non-core and core instances, for there is no causal asymmetry between core and non-core cases: the causal direction can both go *towards* the core (as in ‘productive of health’) and *from* the core (as in ‘indicative of health’). However, *some* kind of priority is clearly presumed for the core cases by Aristotle, and as Shields points out, it is evidently some kind of definitional priority (1999, 123). Having screened the different types of priority listed by Aristotle in the twelfth chapter of the *Categories*, Shields decides that the kind of priority added *en passant* by Aristotle after his initial four-part list (‘priority in time’, ‘priority with respect to implication of existence’, ‘priority in arrangement’ and ‘priority in value’, *Categories*, 14a26–b8) might very well be the notion of priority that he is after. This fifth type of priority is tentatively called ‘priority in nature’ by Aristotle, and he describes it by telling that even among things that reciprocate with respect to implication of existence,⁷³ one of them may nevertheless ‘in some way [be] the cause of the other’s existence’ (τὸ αἴτιον ὅπως οὖν θατέρω τοῦ εἶναι, *Categories*, 14b12). To clarify what he means by this somewhat opaque description, Aristotle tells us that even though some state of affairs, say Socrates’ being hung over, and the true proposition that Socrates is hung over reciprocate with respect to implication of existence, Socrates’ being hung over is nevertheless responsible for the proposition’s being true, while the converse does not hold, that is, the proposition’s being true is *not* responsible for Socrates’ being hung over.⁷⁴

What makes this kind of priority appealing for Shields is first and foremost its asymmetrical nature. Of the other types of priority listed in this chapter, the second type is both relevant and also possess the wanted kind of asymmetry. So, on what criteria

73 That is, that the existence of one is implied by the existence of the other, and vice versa. For things that do not reciprocate with respect to implication of existence, the existence of one implies the existence of the other, while the converse does not hold. This is by the way the definition of Aristotle’s second type of priority: ‘[One thing is prior when it] does not reciprocate with respect to implication of existence’ (*Categories*, 14a29–30, my translation)

74 In more familiar philosophical jargon: the state of affairs is responsible for the existence of the true proposition (or, to be slightly more precise: responsible for the truth of the proposition) by being its truthmaker. See Armstrong (2004) for a theory of truthmaking.

does Shields choose among them? What makes the fifth type preferable over the second is that it is very unlikely that core and non-core homonyms will not reciprocate with respect to implication of existence. Even though it is not necessarily the case that a brownish hue to the skin is an indication of health, or that some particular diet is productive of health, there will nevertheless be things ‘filling the roles’, so to say, of being indicative of health and being productive of health. So the asymmetry in question cannot be based on a capacity for independent existence, for the core case will most likely depend on non-core cases for its existence. The fifth type of priority is therefore to be preferred since it can provide the wanted asymmetry while at the same time tolerating reciprocation with respect to implication of existence.

When we now consider the relations between core and non-core instances of core-dependent homonyms in the light of this fifth type of priority enumerated in the *Categories*, ‘priority in nature’, we find that the core homonym ‘will be in a way the cause of the existence of a derived homonym, or perhaps more broadly will be *responsible* for its existence (τὸ αἷτιον ὁπωσοῦν θατέρῳ τοῦ εἶναι)’ (Shields, 1999, 124). Having thus found a way of explicating the asymmetric relation between the core homonym and the derived ones, Shields suggests this further refinement and expansion of CDH*:

CDH**: *a* and *b* are homonymously *F* in a core-dependent way iff: (i) they have their name in common, (ii) their definitions do not completely overlap, (iii) necessarily, if *a* is a core instance of *F*-ness, then *b*’s being *F* stands in one of the four causal relations to *a*’s being *F*, and (iv) *a*’s being *F* is asymmetrically responsible for the existence of *b*’s being *F*.

With this additional clause, the above definition of core-dependent homonymy brings out that a core homonym qualifies as a such by being responsible for the derived homonym’s being *F*: ‘Its being *F* is [...] derived from the source’s [i.e. the core’s] character’ (Shields, 1999, 125). And the priority involved is such that the source can be responsible for the derived instances’ being *F* (in an asymmetrical way) even though the source and the derived instances reciprocate with respect to implication of existence. As Shields summarizes: ‘Here, then is a primitive form of priority, not reducible to any

other form, which Aristotle may intend in calling the core instances ἀρχαί⁷⁵ (1999, 125). Respecting the constraints laid down by this notion of priority on the core homonyms, in what sense of the term, then, can a core homonym be said to be a ‘source’? An illumination of this question is what Shields turns to next. ‘Source’ is said in many ways according to Aristotle, but only a few of those sayings can reasonably be taken to fit the notion of priority that was used to explicate the relation between core and non-core homonyms above. Among those that seem ‘directly relevant’ (1999, 125), however, Shields singles out being an ἀρχή in the sense of being ‘that from which something can first be known’ (*Metaphysics*, 1013a14–15), of which a premise in a demonstration is the immediately given example. For, as Shields says, the ‘[p]remises are the sources of their conclusion in the sense that they are responsible for the existence of a proposition’s being a conclusion’ (Shields, 1999, 125). The asymmetrical relations obtaining between core and derived instances of homonyms are thus, according to Shields, directly analogous to the primitive entailment relations in virtue of which a conclusion is derived from its premises:

So too is the asymmetry in core-dependent homonymy primitive: the cores are sources because they are semantically and metaphysically super-ordinate to their derivations. A complexion is healthy because its being healthy is explicable in no other way than in its standing in an appropriate relation to a healthy entity. (Shields, 1999, 126)

To sum up the finale of Christopher Shields’ analysis of core-dependent homonymy, he has argued that the core homonym is a source in the sense of being asymmetrically responsible for the existence of the derived homonyms’ being *F*s. This priority of the core instance, however, is primitive, and therefore not reducible to any other kind of priority. Accordingly, Shields does not give us any additional clues as to *how* a core case, say health, is responsible for the existence of a regimen’s being healthy, except that it is similar to the way in which the premises in some argument are responsible for the existence of a proposition’s being a conclusion.

⁷⁵ I suppose that the reason why Shields calls this type of priority a *primitive* one, is just that it is not reducible to any of the other four kinds listed in the chapter from the *Categories*. Thus I think his idea is merely that they are all, so to say, on the same level and equally basic. As we saw, however, Aristotle tentatively suggested the epithet ‘natural priority’ for it, so I find it a bit strange that Shields does not employ that name.

There are a few rather surprising aspects to the way Shields explicates the asymmetry in the relations between core and non-core homonyms. These merit comment. When discussing the type of priority a core homonym possesses over a derived homonym, Shields is conspicuously negligent of the fact that his chosen type of priority, ‘priority in nature’, could very well have been characterised as a kind of causal priority. In the sentence clarifying this kind of priority—‘being asymmetrically responsible for the existence of...’—we even find the Greek word for cause, αἴτιον (translated as ‘responsible’ by Shields), so that what Aristotle actually says is that among things that reciprocate with respect to implication of existence, one thing can nevertheless be prior in relation to the other by being the cause of its existence. But having already ruled out that the core homonym could be causally prior to the derived ones, Shields seems almost eager to cover up this possibility, and chooses rather to talk of it as a ‘primitive type of priority’ than to make any indications to the effect that priority in nature might possibly be some kind of causal priority. It is equally stunning that he, when talking about ‘directly relevant’ senses of being sources for core homonyms, directly opts for ‘that from which something can first be known’ (1013a14–15), without even airing the possibility that a core homonym can be a source for derived homonyms by in some way being their cause, although he surely must know that Aristotle holds that all causes are sources (πάντα γὰρ τὰ αἴτια ἀρχαί, 1013a17). Since Shields believes that causal relations between instances of homonyms is what makes them qualify as core-dependent, it is surprising to find that he does not delve deeper into the possibility that the causal relations could also provide the explanation of the source-character of the cores, and consequently of the definitional asymmetry holding between core and non-core instances. Also in this case I believe that his somewhat conspicuous evasion from considering the possibility that core instances qualify as sources by being causes is due to the fact that he thinks he has already ruled out the possibility of such a causal priority to the core. For, as we remember⁷⁶, Shields does not believe that the priority of core homonyms in relation to the derived ones can be accounted for causally since the direction of the causality in the causal relations between them varies, so that it does not map the asymmetry that is supposed to hold between core and non-core homonyms.

In the next section I will briefly revisit what I deem to be Shields’ somewhat premature dismissal of causal priority as a possible explication of the asymmetry in the relation between core and non-core homonyms. I will also address some other problems pertaining to Shields causal analysis of core-dependent homonymy.

⁷⁶ See footnote 61 and the discussion in the main text from which it springs.

4 Challenges to Shields' analysis

As we have seen, it is expected of a fully satisfactory explication of core-dependent homonymy that it be able to account for the asymmetrical dependence of derived homonyms on their core,⁷⁷ that is, it must give some explanation for why the definitions of the non-core instances must make reference to the core instances, but not the other way around. In his analysis of core-dependent homonymy, we saw that Shields believes that this asymmetry cannot be explained by the causal relations obtaining between instances of homonyms, for the simple reason that the direction of the causality that connects different homonymous instances can head both towards and from the core instance. For in Shields' view, the thing from which the causality flows, so to speak, is regarded as causally prior. Let me explain this in some detail. A healthy person and a healthy regimen are homonymously healthy in a core-dependent way because the healthiness of the person and the healthiness of the regimen are causally connected. According to Shields, the health of the regimen is in this case causally prior to the health of the person by being an efficient cause of the latter. The direction of the causality goes *from* the healthy regimen *towards* the health of the person. In other cases, however, the direction of the causality is the reverse, it goes *from* the health in the person—the core instance of health—*towards* derived instances, such as health in a skin colour. In this situation, the health of a person will be an efficient cause of the healthy skin colour, and by Shields criteria, causally prior to it. The health of a person will thus, relative to different derived instances of health, be both causally prior and posterior. But as we know, the health of a person—being the core instance of health—is supposed to be prior to all the derived instances of health by being the instance to which the definitions of all the derived instances must make reference. So conclusively, since the core instance is not *causally* prior to the derived instances in every case, its priority in relation to them can therefore not be accounted for causally.

The causal relations that most obviously destroy the candidacy of causal priority in Shields' picture, are efficient causal relations with directions towards the core instances, such as our example of a regimen producing health in a person. The regimen is in this

⁷⁷ See 2.2 for the requirements to specifications of *R*, the relation between core and non-core instances of a homonym.

situation the cause, and the resultant health, the effect. What is interesting, however, is that all the things that qualify as efficient causes in such relations, can also be placed in another causal role. A regimen can certainly be an efficient cause of the health of a person, but the health of a person can likewise be said to be the final cause of the regimen, its goal and ‘that for the sake of which’ (τὸ οὗ ἕνεκα) it is followed, insofar as it is a *healthy* regimen. Accordingly, a healthy regimen can be seen as standing in both an efficient and a final causal relation to the health of a person. And notice, in the second of these relations, the causal priority matches the definitional priority, for in this case the direction of the causality heads from the core towards the non-core instance. So the things, or more properly activities, called healthy because they are efficient causes of health, could equally well be called healthy due to the fact that their final cause is health. And only in the first of these types of causal relations is the role of the activity (i.e. the regimen) such that it has causal priority. In the second, health, as final cause, has causal priority relative to the regimen, since the causal direction in this case goes from health towards the regimen. So the health of a person, the core instance of health, can—even on Shields’ criteria—be seen as causally prior to the healthy regimen, and thus as a causal (!) source of the derived instance. This fact indicates something very interesting about the ways different types of causal relations are connected. I will get back to this in a moment, but before that I would like to make a comment on Shields’ criteria for causal priority.

As we have seen, Shields employs a notion of causal direction when deciding matters of causal priority: that from which the causal direction heads (in a causal relation), has causal priority. When illustrating this notion, he exclusively makes use of examples involving efficient causality (1999, 113 and 122). And indeed, in these examples, the idea of causal direction does sound plausible: When a mountain hike produces health, the direction of the causality goes from it (i.e. the activity of tumbling around in the mountain), towards the health of the particular person, the end product. With respect to cases of final causation, however, it is not similarly natural to talk of a direction of the causality (viz. from the cause, the goal, to the caused instance, some specific activity). The situation is similar in the case of material causation. Also here talk of causal direction seems strange. Just consider the example given of muscles, arteries and blood constituting the material cause of an organism. I am not at all sure that it makes sense to talk of the causation being *directed* towards the organism in this case. So the very idea of a causal direction in the Aristotelian causal relations seems problematic. It seems too infused with movement and maybe even a temporal sense of before and after, and thus

having more to do with a notion of causality in terms of bumping and pushing and contiguity in time and space than to anything Aristotelian. In short, talk of causal direction seems to be tied up in a spatio-kinematic imagery unfitting for at least three (and most probably all) of Aristotle's four causes, and should most likely be dismissed. Consequently, causal direction does not seem to be a very good candidate for determining something like causal priority. Be that as it may, I have no intent of giving any conclusive argument against the idea of causal direction here. I merely want to express some discomfort with the notion, along with some rather experimentally spirited suggestions. Leaving a discussion of causal direction to the side, let us instead take up the thread from the last paragraph and proceed with a completely different take on causal priority.

4.1 Causal priority 2.0

I previously hinted to an interesting connection between types of causality. This was occasioned by the revelation of the dual causal roles performed by the very same items in final and efficient causal relations. As we discovered, the health of a person can for example be seen both as the effect of a mountain hike (viz. as the effect of an efficient cause), and as the final cause of the mountain hike. The thought that sprang to mind at this point was that if there exist relations of priority and posteriority among the causes, then this could possibly explain the asymmetry in the relations between core and non-core instances of homonyms. The reason for this is that if (i) core and non-core instances of core-dependent homonyms inevitably stand in causal relations with respect to each other—as suggested by Shields' analysis—, and (ii) all causal relations can be charted in a way that brings forth their connection to the primary cause (due to the interrelatedness of different causal relations, as was shown in the example of final and efficient causality), then (iii) the asymmetrical dependence of the derived instances on the core will be explicable in terms of a sort of causal priority, and the core instance will count as source in a causal sense, i.e. by being a cause. (This presupposes, of course, that the primary cause will actually prove identical to the core homonym in every case).

So, are there any indications that Aristotle believes that causes are ordered according to priority? There are, and that in two very significant places. Both when introducing his

four-causal explanatory scheme in the *Physics*, and when proclaiming that First Philosophy will be preoccupied with investigating the principal causes we find him mentioning ‘the primary cause’ (τὴν πρώτην αἰτίαν). In the *Physics* he says: ‘[M]en do not think they know a thing till they have grasped the ‘why’ of it (which is to grasp its primary cause)’ (194b18–20). The statement in the *Metaphysics* reads similarly: ‘[F]or we say we know each thing only when we think we recognize its first cause’ (983a25–26). A third place in the corpus, *Parts of Animals* I 1, provides further clarification of his view on priority among causes:

[T]he causes concerned in natural generation are, as we see, more than one. There is the cause for the sake of which, and the cause whence the beginning of motion comes. Now we must decide which of these two causes comes first, which second (ποία πρώτη καὶ δευτέρα). Plainly, however, that cause is the first which we call that for the sake of which. For this is the account (λόγος) of the thing, and the account forms the starting-point (ἀρχή), alike in the works of art and in works of nature. (639b12–17)

So, the final cause (‘that for the sake of which’, τὸ οὗ ἕνεκα) is prior to the efficient cause (‘the cause whence the beginning of motion’, τὴν ὅθεν ἡ ἀρχὴ τῆς κινήσεως), but what kind of priority does Aristotle have in mind here? The reason he gives in support of the priority of the final cause gives us a clue. The Oxford translation cited above, however, risks leaving us without a clue. So a little preliminary clarification is first needed. Λόγος, which here is translated with ‘account’ is best rendered ‘form’ or ‘essence’ in this context, such that what we actually find in the last sentence is an identification of final cause with form or essence.⁷⁸ We are namely told that λόγος is a natural principle (ἀρχὴ ... ἐν τοῖς φύσει συνεστηκόσιν, 639b16–17), and being a linguistic item, an account does not seem up to such a task. That being said, there will of course be an account corresponding to the form, an account that states what the form (or better: the thing that has the form) essentially is.⁷⁹ Talk of a thing’s λόγος will thus be ambiguous in that it can either concern the account or real definition of the thing or the

⁷⁸ For another place where λόγος is identified with essence, see *Metaphysics* A, 993a17: ‘[T]his (i.e. λόγος) is the essence and the substance of the thing.’ And concerning the identity of form and essence, see *Metaphysics* Z, 1032b1: ‘By form I mean the essence of each thing.’

⁷⁹ What I called *real definition* in 2.2.

real correlate of the definition; the form or essence that is signified by it. This ambiguity is actually exploited by Aristotle in the passage immediately following the one cited above. Here he aims at clarifying what is meant by the claim that λόγος is a principle in both works of art and works of nature, and he does so by showing how it figures as a principle in the execution of a craft:

[T]he doctor and the builder define health or house, either by the intellect or by perception, and then proceed to give the accounts and the causes of each of the things they do and of why they should do it thus. Now in the works of nature the good and that for the sake of which is still more dominant than in works of art. (639b17–21)

In order to being able to build a house, the craftsman will need to acquire for himself the account of a house. Banally put, he must learn what a house is. Gaining the possession of this account will involve, according to Aristotle's theory of thinking, the realization of the form of the house in the soul of the craftsman. This is, however, not an ordinary realization of the form of the house—for this would mean that the soul would literally become a house when thinking of a house—, but rather a realization of the form without matter, what we have called an *encoding* of the form in the soul.⁸⁰ Only when he possesses the account of a house (viz. the form of the house is realized in his soul) can the craftsman go about planning the process leading to the realization of the house: what must be done, how it must be done, and in what order it must be done. The efficient causes, the ones that actually produce the house, are thus only explicable with reference to the house, the goal of the activity of housebuilding. That is, only with the goal in view, the house, can the craftsman determine the detailed route leading to the finished house. Accordingly, the character of the efficient causes, their mode of being, is dependent on the character of the final/formal cause, or as Alan Code puts it in a paper on the priority of final causes: 'The reason why the changes have the character they do is that *that* is the character they need in order to bring about the result' (1997, 136). Aristotle believes that cases of natural generation are exactly analogous to the described case of artistic production, and thus that the same dependence relations between efficient and final/formal causality are found in natural generation as well. The only

80 For Aristotle's account of thinking, see *De Anima*, 429a13–17. The distinction between exemplifying and encoding a form is presented above in 3.1.

difference is that in natural generation you have no deliberating agent executing his craft through meticulously calculated interventions on some external matter, but rather a form or goal inherent in the natural object regulating the processes and changes in it. And, he even adds, in natural generation the final cause's reign over the efficient causes 'is still more dominant' (639b21) than in artistic production.

From this discussion in the *Parts of Animals* it seems clear that the kind of priority that Aristotle wants to ascribe to final/formal causes is that which in the list in *Metaphysics* Delta 11 goes under the name 'priority in nature and substance' (1019a1–4).⁸¹ For Aristotle says of things which are prior in this way that they can be what they are independently of other things being what they are, while the converse does not hold. This seems exactly to fit what we have said about the nature and the character of the efficient causes depending in their being on the final/formal cause, while the final/formal causes does not depend in their being on the efficient causes. This dependence between the natures of the different causes corresponds to the asymmetrical dependence among their respective accounts: The efficient causes are not explicable independently of the final/formal causes, whereas the final/formal causes can be stated without reference to the efficient causes.⁸²

We have seen that the final/formal cause is prior to the efficient cause. But what about the material causes? And does our identification of formal and final causes really have legitimacy? To answer the last question first. The final and formal cause will always coincide in natural things, so in these cases the identification is unproblematic.⁸³ With respect to artefacts, on the other hand, it appears that they in some respect go

81 Cf. *Generation of Animals* II, 6, 742a19–21: 'For there is a difference between the end or final cause and that which exists for the sake of it; the latter is prior in order of development, the former is prior in

82 I am here committed to Michail M. Peramatzis' account of priority in nature and substance in terms of 'priority in being what something is' (2008, 189). Being influenced by Kit Fine's paper 'Ontological Dependence' (1995), Peramatzis argues that the ontological independence of the primary thing must not be understood in terms of existential independence (viz. 'being capable of independent existence'), but rather as an independence in being what it is, a kind of priority that correlates with definitional priority. As Fine says: 'The notion of one object depending upon another is therefore the real counterpart to the nominal notion of one term being definable in terms of another' (1995, 275). Although I will not here be able to carry out an extensive defence of this interpretation of Aristotle's notion, one example might nevertheless give a hint of its superiority over the 'existential independence'-interpretation: Even though a form cannot exist independently of the type of matter or the composite which it en-forms, the form is nevertheless prior to the matter and the composite in that it makes the composite (i.e. the particular substance) be what it is, and not the other way around (cf. *Metaphysics* Z, 1–6). *Priority in being what something is* can account for this; *priority in existence* cannot (cf. Peramatzis, 2008, 205–206).

83 Cf. *Physics* II, 7, 198b3–4: '... the essence of a thing, i.e. the form; for this is the end or that for the sake of which' (τὸ τί ἐστὶν καὶ ἡ μορφή· τέλος γὰρ καὶ οὗ ἕνεκα).

apart. It can namely be argued that ‘form’ should be understood as shape or arrangement in these cases. The form and the purpose, i.e. the formal and the final cause, will nevertheless be closely connected in these situations too. Being familiar with Aristotle’s commitment to the thesis of functional determination of kinds, this should not come as a surprise.⁸⁴ For goals and purposes, which belongs to all functions, will delimit the range of possible shapes and arrangements of the things, so that the shape or arrangement of the object to a further or lesser extent will depend on the purpose it is made to serve, and thus will be bound up with the function and final cause of the object in question. This is really just to say that even though chairs can have different shapes and looks, there are shapes and looks and ways of being arranged that is not compatible with being a chair (viz. with performing the functions associated with being a chair). So in these cases, where a plain identification of formal and final causality seems unwarranted, the final cause appears to have priority over the formal cause.

Let us now turn to the second question, about the possible posteriority of the material cause in relation to the final/formal cause: Matter in Aristotelian philosophy is best understood as proximate matter, that is, as functional material for some particular substance: the material parts that contributes to the functionality of the substance. Any specifiable matter such as blood, bones, and organs will thus be en-formed matter, matter which depends for its identity and character on the form with which it jointly compose a substance. What the matter in some particular instance is, is consequently only specifiable with reference to the substance whose matter it is. Since the form is what makes the substance be what it is, the form clearly has definitional priority over matter. And as we have seen, this priority in definition is correlated with priority in nature and substance. From this somewhat crude summary of Aristotelian hylomorphism, we can conclude that the final/formal causes are prior in nature and substance to material causes.⁸⁵

Having seen that Aristotle holds that final/formal causes are prior (in nature and substance) to efficient and material causes, it seems that we have found another way of explicating the asymmetrical dependence between non-core and core homonyms than the way proposed by Shields (viz. in terms of a ‘primitive priority’). For, since all causes depend in being what they are on the final/formal cause, the aspect of

⁸⁴ See 2.4, where this is introduced.

⁸⁵ Aristotle’s functional determination thesis (FD) reflects this commitment to the priority of form over matter in that it states that the matter of man (i.e. body parts such as eyes, fingers, legs etc.) will not really qualify as such (i.e. as the matter of man) if it cannot perform the functions associated with different body parts (cf. *De Anima*, 412b10–15). For more on FD, see 2.4.

asymmetrical dependence in the (causal) relations between core and non-core homonyms is accounted for. That is, the final/formal cause's priority in nature and substance in relation to efficient and material causes can account for the aspect of asymmetry in the relation between core and derived homonyms, provided that the core homonym would actually prove to represent the final cause in the causal relations it has to the derived cases. And if we have a quick look at Aristotle's favourite illustrations of core-dependent homonyms, this seems to be the case. For among all the healthy things, the healthy person seems to be the goal to which all the other healthy things must be appropriately casually related in order to qualify as healthy. And likewise with all the medical things: The art of medicine seems to be the goal to which all the other medical things must be appropriately causally related for them to qualify as medical.

We have now demonstrated that a notion of causal priority, *pace* Shields, can explain the asymmetric dependence of the derived cases on the core. It is, however, a different notion of causal priority than the one discussed by Shields. In the preferred sense of 'causally prior', a cause is prior with respect to another cause if it can be what it is independently of the other causes being what they are, but not conversely.⁸⁶ In this understanding of causal priority, the core homonym will consequently count as an ἀρχὴ by being the causal source of the derived cases. This is something that is vastly preferable over the suggestion that a core homonym is an ἀρχὴ by possessing an (inexplicable) primitive priority.

I will not at this point venture into a detailed defence of this alternative way of explicating the priority and source-character of the core in relation to the non-core homonyms. Neither will I consider what results we will actually get if apply the established criteria for core-dependency (CDH**) on Aristotle's own candidates for core-dependent homonymy. That is, I will not enter a discussion about which candidates will pass as core-dependent homonyms, and which will not.⁸⁷ What I will do, however, is to briefly consider the very tenability of a causal analysis of core-dependent homonymy. For in some cases of core-dependent homonymy, the relations between the core and the derived instances do not immediately seem specifiable in causal terms. The cases I specifically have in mind is homonyms ordered in so-called priority series (P-series). My presentation of these homonyms will be based on A. C. Lloyd's work on P-

⁸⁶ Shields account of causal priority, on the other hand, states that among things or events that are causally related, that thing or event from which the causal direction heads, is causally prior. As we have seen, it is, according to Shields, the account's appeal to causal direction that makes it unfit to explain the definitional priority of the core homonym.

⁸⁷ For such discussions see Shields (1999), Lewis (2004) and Ward (2008).

series, but my treatment of his work will be selective as I will focus only on the aspects of his analysis that is directly relevant to the broader discussion of this thesis.

If we in our investigation into yet other types of homonymy find that there are core-dependent homonyms whose interrelations resist causal specification, the generality of Shields' account would be threatened. If the generality gets lost, and it is revealed that only some relations between core and non-core homonyms can be causally specified, doubts should be had about whether an analysis of the relations between core and non-core homonyms in causal terms is really what gets at the heart of the matter in the relation between them.

4.2 Priority series

For objects that have an order of priority, Aristotle holds that their common predicate or universal is not something apart from them. I will in the following refer to such an ordering of objects as P-series (after Lloyd, 1962), and will take the liberty to switch between talk of the objects and terms (that designate the objects) when talking about the items in the series. In the paper 'Genus, Species and Ordered Series in Aristotle' (1961), A. C. Lloyd identifies two things that Aristotle could mean by denying that the universal or common predicate of a P-series is *παρὰ τὰ εἶδη*. Firstly, he could mean to deny that it is one of the secondary substances of the Categories; a separate, substantial universal. Lloyd coins this the *metaphysical thesis*. Secondly, he could mean to deny that the universal is logically related to series terms as genus to species, that is, that the universal is predicated essentially and synonymously of the terms. Lloyd coins this the *logical thesis* (1962, 68).⁸⁸ Lloyd shows persuasively that Aristotle, in claiming that the common predicate of a P-series is not *παρὰ τὰ εἶδη*, in various places in his work intends to express both the metaphysical and the logical thesis. For people familiar with Aristotelian philosophy, it is of course no surprise that Aristotle submits to the metaphysical thesis. But it is worth mentioning in this connection that even Platonist philosophers hold this thesis with regard to the universal of a P-series. As Lloyd explains it:

⁸⁸ Since a thesis about the non-synonymy of the common predicate of things in P-series will also be a thesis about the differing natures of the things in the series (cf. Aristotle's view on signification, presented in 2.2), the name 'logical thesis' is a bit misleading and actually conceals the fact that the thesis is concerned with more than mere logic.

In such a series one of the terms is first in the order of priority (for example, the double in a series of multiples); but if there were a separate Idea (say, multiplicity) which embraced this series it would be prior to all the terms, so that what had *ex hypothesi* been first would no longer be first. (Lloyd, 1962, 70)

It is because the Idea, according to the theory of Ideas, would have to rank as one of the terms of the series, that the Platonists are forced to hold that there is no Idea corresponding to the universal of the P-series (for example no Idea of number apart from the Idea of two, three, four etc.)⁸⁹ (Lloyd, 1962, 70). This, however, is not yet to refute a logical genus of a P-series. So the Platonists need not ascribe to the logical thesis. But, as we shall see, Aristotle ascribes to it. That this is something of interest in the context of this thesis should be clear from the fact that a denial of a synonymous common term for the P-series in effect implies the assertion that the common term of the P-series is predicated homonymously of the objects in the series.⁹⁰ It is accordingly the logical thesis that will occupy us in the following.

Let us now, with Lloyd, consider two of the most famous places where Aristotle is clearly expressing the logical thesis. The first is in the *Politics* III, 1. After having given a provisional definition of the state (πολίτης) Aristotle proceeds by saying:

But it must be remembered that when we are talking of things which differ specifically, but one of which is first, another second and the next third, the universal predicate (τὸ κοινόν) of the class is either non-existent (τὸ παράπαν οὐδέν) or virtually so. (1275a35–37, Lloyd's translation)

Arguing that states (πολίται) form such a class, Aristotle uses this to draw his somewhat famous conclusion that the citizen is necessarily something different (ἕτερον)

89 Two is the first number (ἀριθμός) for the Greeks. One is understood as unity (μονάς), and is regarded

90 Before we proceed, though, I will like to make a note of clarification. Although all things ordered according to priority would seem to constitute P-series on the criteria given by Lloyd above, inclusive e.g. healthy things, what he has in mind when using this designation is something more restricted. For the things he talks about as ordered in P-series, such as numbers, figures, souls, states etc., appear to have their essential predicate in common (and not just an accidental, one such as 'healthy'). In what follows I will

in different kinds of states.⁹¹ The second place where he clearly expresses the logical thesis is in the *De Anima* II, 3:

Soul would have a single definition in the same way as figure: there is not *figure* apart from (παρά) the triangle and its successors and there is not *soul* apart from the ones that have been mentioned. One could have a definition predicable of figures in general (λόγος κοινός): but while it will apply to all figures it will be definitory (ἴδιος) of no figure. Similarly in the case of the kinds of soul that have been mentioned. (414b20-25, Lloyd's translation).

What Aristotle claims with respect to the objects in P-series is that there is not some one common nature that is predicable of them all, as in the case of ordinary genus-species classification. For in contrast to biological species where the same animality figures in the essence of both wolf and man, there is no one soul-nature present in the nutritive, perceptual or rational souls, or one figure-nature present in triangles, quadrangles, and pentagons. Soul-nature is immediately differentiated into the nature of nutritive, perceptive and rational soul respectively, and similarly with figure-nature. As Lloyd (referring Simplicius) says: 'The generic universal does not remain constant (ἀποράλλακτος) but is differentiated in the species (καθ' ἕκαστον διαφορούμενον)' (1962, 79). Also commenting on the logical thesis, Steven Strange writes: 'In some sense there is a universal, but it differs in account in its application to the successive terms of the series, hence it cannot be a genus' (1987, 967). Strange continues with a nice illumination of the claim in the logical thesis by elaborating on Aristotle's example of figures:

There cannot be a definition of 'rectilinear figure' in general which is not identical with the definition of any of its subtypes, as the definition of a genus must be: e.g., 'surface bounded by lines' is incomplete; it means, 'surface bounded by n lines' for some value of n, which is the definition of one of its species and therefore cannot be the definition of the genus. The same is true in the case of soul, according to Aristotle. (1987, 967)

91 The reasoning here is as follows: What it is to be a part depends on the whole of which it is a part, and since citizens are parts of states, what it is to be a citizen will inevitably vary in different kinds of states.

Even though ‘soul’ and ‘figure’ designate species, that is, some type of soul are some type of figure, this is not to say that they cannot behave like genus terms, for they do. All the terms of a P-series (that have successors) are namely necessarily predicable of their successors.⁹² This is because the terms in a P-series ‘potentially contains its predecessors’ (*De Anima*, 414b31). So, for example, ‘nutritive soul’ is predicable of both sensible and rational soul, and the reason for this seems to be that the primary thing, nutritive soul, enters into the composition of the posterior thing, sensible soul, and that it is in this way that they are ‘potentially contained’ in them. The following passage might clarify what Aristotle means:

For the power of perception is never found apart from the power of self-nutrition, while—in plants—the latter is found isolated from the former ... Again, among living things that possess sense some have the power of locomotion, some not. Lastly, certain living beings—a small minority—possess calculation and thought, for (among mortal beings) those which possess calculation have all the powers above mentioned, while the converse does not hold—indeed some live by imagination alone, while others have not even imagination. (*De Anima*, 415a1–12)

In the light of his own examples and illustrations, it seems clear that Aristotle thinks that the priority involved in P-series is some kind of ontological priority. There are quite a few ways to understand ontological priority, but the one immediately suggesting itself, is one in terms of existential dependence. In the cited passage from *De Anima* the import of what Aristotle says seems to be that the nutritive soul is prior to both sensitive and rational soul by being capable of existing independently of the latter two, whereas they cannot exist without nutritive soul.⁹³ In addition to being in some sense ontologically prior to the other types of soul, the nutritive soul seems to be definitionally prior to them. When looking at the accounts of such activities as perceiving, thinking, imagining etc. in the second and third book of *De Anima*, one finds that the account of sensation makes reference to nutrition, and the account of thinking makes reference to sensation. If thinking cannot be accounted for or defined without reference to sensation—for example in that thought, or at least the content of thought

⁹² So the last term of a P-series is the only one that does not behave like a genus.

⁹³ Strictly speaking, the rational soul depends on the sensitive soul. But since the ‘depends on’-relation is transitive, the rational soul will depend on the nutritive soul as well.

depends on sensation—, than sensation is definitionally prior to thinking. As we have seen earlier, there is a distinct type of ontological priority, ‘priority in being what something is,’⁹⁴ that can reasonably be described as the ontological correlate to such definitional priority. So maybe the priority relations between the items in the P-series are best captured by this notion of ontological priority? Compared to the notion of ontological priority in terms of existential dependence, it does at least seem to have one advantage. For if one accounts for the priority of the nutritive soul in relation to the other souls in terms of existential independence, one seems forced to accept that along with every rational soul, there exist both a nutritive and a sensitive soul, since the former ‘depends for its existence’ on the latter two. This is truly an unfortunate outcome, and the alternative, that rational soul depends in being what it is on the being (but not the existence) of sensitive soul, therefore seems preferable.

When regarding Aristotle’s other main example of things ordered in P-series, namely figures, a notion of ontological priority seems also here to be successful in explaining the way in which the primary object/s is/are potentially contained in the successive objects. In this case, however, the notion of ontological priority in terms of existential dependence seems to be the most appropriate. According to Aristotle, every polygon is composed out of (and can be decomposed into) triangles. One can thus say that for any polygon, it depends for its existence on n number of triangles. —Remove a triangle from the figure, and the original figure will be destroyed. The kind of ontological priority enjoyed by the triangle in relation to the other polygons does not seem to be reflected on the definitional level however. Even though other polygons probable *can* be defined in terms of triangles, it does not seem plausible that they *must*. It therefore seems perfectly possible for any given polygon to be defined without reference to triangle.

Aristotle’s third example of objects that are ordered in P-series, states (πολίτεια), deviates in important respects from the other two examples, and prove much less interesting in reference to this discussion. In the P-series of states there are only two items, one prior and the other posterior, and their ordering is determined by the one being in a perfect condition (i.e. the primary object), and the other being in a ‘faulty or perverted’ condition (i.e. the posterior object) (*Politics*, 1275b1). In P-series of states it is not the case that the primary object is potentially contained in the posterior, that is, the prior item does not enter into the composition of the successive items in this P-series

94 Peramatzis (2008, 189). ‘Priority in being what something is’ is his interpretation of priority in nature

as it does in the P-series of souls and figures. Additionally, the priority involved in this series is of another kind than in the other examples. Even though it is not very clearly stated, it seems that Aristotle holds that one state is prior to the other by being of greater value. However that may be, I will not dwell on this particular type of P-series any longer, for as I said, it is of minor importance relative to our purposes.

Having now gained a decent overview of the general characteristics of homonyms in P-series, what underwrites the homonymy, and how the different homonyms are related to each other, we can now turn to the announced examination of whether Christopher Shields' proposed causal analysis of core-dependent homonymy will prove appropriate for such a clear case of core-dependent homonymy as 'soul'.

5 Conclusion

In our discussion of the P-series of souls above, we saw that the different souls qualifies as homonyms because each type of soul, that is nutritive, sensitive and rational, has their own definition. The definitions are not completely distinct, however, so they are not discrete homonyms. When definitions are not discrete, they overlap, and this is just what we find with respect to the definitions of souls. But it is more to say of the overlaps among the definitions than that they overlap, for the definitions overlap systematically: The account of being for any given soul (except, of course, the primary soul) must necessarily make reference to the account of being for the soul immediately prior to it in the series, so that all souls ultimately make reference to the account of being for the primary soul. All this should clearly indicate that ‘soul’ is a good candidate for being core-dependently homonymous, if anything is. There is, however, one crucial condition it must satisfy. Christopher Shields criteria for core-dependent homonymy, as specified in CDH**, states that all non-core instances of a homonym must stand in one of the four causal relations to the core homonym. Sensitive and rational soul must thus stand in one of the four causal relations to nutritive soul in order to qualify as core-dependent homonyms. So, do they? Both efficient and final causal relations seem easily ruled out, and when remembering the dubious credentials of formal causation, we are left merely with material causation. But is that so bad? The presentation of the logical thesis about P-series above we shows that all the terms in a P-series except for the last in some way behaved like a genus by being predicable of all their successive terms/objects. Additionally, there are several places where Aristotle identifies genus and matter,⁹⁵ couldn’t it therefore be that the prior objects enters into the posterior as material parts? The core instance of the homonym, the nutritive soul, would then count as a material cause of the posterior objects, and they will be connected by a material causal relation, and, voilà!, qualify as core-dependent homonyms. But unfortunately, this cannot be. For, as far as I can see, sight is not a material/functional part⁹⁶ of the rational soul, it is rather a formal part of the rational soul, a part of its nature (cf. *Metaphysics* Zeta 10). And when it ‘enters into the composition of the posterior’ (Lloyd, 1962, 83), it does this not as a material part, but rather as a formal part.

If the reasoning in the last paragraph holds good, then the homonymy of ‘soul’

95 Cf. Grene (1974)

96 Although the sense organ of course is.

constitutes a counterexample to Christopher Shields' proposal of a causal specification of R , the relation all non-core instances of a homonym bear to the core homonym. So, if we are forced to reject Shields' promising attempt at a specification of the way core and non-core homonyms are related, are we left where we started? No. It has been noted several times in the course of this thesis that a notion of priority in nature and substance might be able to take on the job that Shields assigned to FCCP (*four-causal core primacy*), the job of sufficiently specifying the relations between core and non-core homonyms.

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